Occidental Medical Times.

VOL. X. JULY, 1896. No. 7.

VALEDICTORY ADDRESS

On behalf of the Faculty of the Medical Department of the University of California, to the Graduating Class of 1896.

By GEORGE FRANKLIN SHIELS, M.D., F.R.C.S.E., L.R.C.P., etc., Associate Professor of Surgery and Professor of Clinical Surgery in the Post-Graduate Department of the University of California, etc.

Ladies and Gentlemen of the Graduating Class of '96: It has been the custom in the past for those who have delivered valedictory addresses to call attention to the wonderful advance of our science and oft-times to make the substance of their remarks a resume of its progress. I shall, with some hesitation, request your permission to depart from this time-honored custom.

It is your peculiar privilege to have been students during a very active period in the history of the Medical Department of the University of California. A period in which the activity has all been directed toward the achievement of high and noble aims. During these past years a grand fight has been made and a grand battle won. *Pari passu* with the establishment of a higher standard of education and a longer term of study, which places this University in the very van of progress in medical education, and makes her the peer of any similar institution in the United States of America, by persistent effort, and in the face of strong opposition, all the more strong since it was secret and silent, the Legislature of the State, under the regime of our present Governor, has granted a sum of money which will give us a home to which you can point with pride and say—this is my Alma Mater.

When this new home is completed the old Toland Hall, which all have learned to love on account of its illustrious founder, but which has grown all too inadequate for the ever-increasing needs of medical education, will have ceased to exist, still no one dare point with scorn to what they have chosen to call the dilapidated establishment at North Beach, for it in reality is and must ever be acknowledged to be the seed from which all this great success has grown. Had Dr. Toland not handed over his college to the State you could not to-day become Alumni of a University which is to have its well-equipped college in San Francisco, working under one roof in friendly harmony with the schools of law, of dentistry, and of pharmacy.

This growth has been fostered by the combined effort of students, of graduates, of professors, of regents, and of citizens who have the welfare of our institutions of learning at heart. But here let us pause to pay a well deserved tribute of praise to the man who has done more than all the others, who has made the advancement of our college the work of his life. I refer to Professor Richard Beverly Cole, who has been in practice in San Francisco since the year 1852, and who, though intimately connected with all the phases of the troublous history of our municipality, has steadily and perseveringly during the whole of these 44 years had but one aim and object in life, that aim being to advance the best interests and elevate the standing of the profession. This he has done as a citizen, a Supervisor, a Mason of high standing, a practitioner, a teacher, and a many-times elected officer in our various medical societies. He looks back and sees a gradual growth and improvement, and now in the sixty-eighth year of a life of activity, justly honored by the presidency of the greatest medical organization of our land, we have him with us, flushed by victory, armed *cap a pie* with noble intention and ready to gird on his sword, with a youthful vigor, wonderful in one of his years, and stand in the breach to cheer on his tardy juniors with the war-cry of progress. Members of the Faculty, graduates, it is indeed a privilege to have a man of such concentrated energy as our President. May it be the will of the Almighty that he be spared to witness the completion of our new building, and continue to address the students within its walls.

With an ever-increasing tendency towards concentration of our interests, any reason for a lack of combination among the graduates of the State University, if ever present, exists no more, and I make it the burden of this address to beg of you to hold up the honor of your Alma Mater. Join her Alumni Association, and watch her interests with a jealous eye. There has, in the past, been a tendency to draw a line between the graduates of what might be called the Professional Departments and the Department of Letters. True, the fact they are situated respectively in San Francisco and Berkeley makes close relationship during student life difficult. Again, until now, the professional departments have been scattered over the city, so that the one scarcely knew of the other except by name, under such circumstances there could be no combination; under the conditions which now exist they will be drawn together by a bond of closer relationship and will gain strength from one another.

There has been, unhappily, a theory among the Alumni of the School of Letters that the general education of the average medical graduate was of so low a standard that he could not occupy a common ground with those who had worked for and taken their scholastic degrees. Unfortunately this used to be true, not so much perhaps of the graduates of the Medical Department of the University as of the graduates of institutions owned and presided over by self-elected presidents and teachers, proprietory colleges, if I may so call them. Unfortunately the public have not as yet grasped the difference between such schools and a University which exists as the highest monument to the States' forethought for its present and future generations.

Our Medical Department, while it was one of the first to increase its technical standard, has steadily raised the standard of preliminary education; and I trust that in the near future every man intending to study medicine will not think it a hardship, but will learn to know that it will be immensely to his interest to be Master of Arts before he takes his M.D.

True it is that for personal virtues, for a certain ethical habit, which in its loftiness, simplicity, and unselfishness is perhaps incomparable, the general practitioners of medicine offer a noble example to all other men; for they carry their high standard of conduct with a humanity, a moderation, and a modesty which do not invariably adorn the righteousness of other men. Yet, with all this breadth of practical ethics, we do not generally find a corresponding breadth of mental culture. The master mind of western civilization has drawn a distinction between the man who is well equipped as a craftsman, trained to quick observation and ready dealing with the things of to-day, and the man who may or may not be so skilled in practical matters, but whose knowledge is far wider and deeper; who has, in a word, a training in philosophy.

The more practical man, valuable as he is, has but a simulacrum of knowledge, a kind of sham or surface instruction, and having no acquaintance with principles he tends to routine, and is unprogressive and wasteful. He is a man of opinions, and as science undermines opinions and treats them with some irony and sarcasm, perhaps, indeed, with some injustice, the practical man tends to wince from science, and will even thank God that he is not a philosopher. His usefulness, then, great as it may be, is temporary and provisional. It is far otherwise with the man whose mind is open to ideas, who is moreover prepared for life not merely by the appropriation of the thoughts of others, but by the enlargement and development of his own intellect; for, indeed, we should not only become familiar with the laws of phenomena within our own pursuit, but also with the modes of thought of men engaged in other discussions and researches, and even with the laws of knowledge itself—that highest philosophy.

Now this mental training, although it happily exists in a few, is not by any means the key-note of medical practitioners as a class. This defect is to be referred principally to the lack of university education. It would be well, therefore, if each and every one of you were to act as promulgators of the doctrine of the great advantage of a degree in arts, not only as a preliminary to, but shall I say as the first step towards the study of the science of medicine.

By graduation you *ipso facto* become an integral part of the university, and should always keep in touch with it. It is the very soul of university life that this should be so. Only a few weeks since it was my privilege to be in Harvard, the guest of a graduate who had been away for many years. He introduced me to his old fraternity, and subsequently we went to a performance given by the students at the "Hasty Pudding" Club. Could you have seen the natural way in which he, and many other graduates, seemed to fit in their place as though they had never been away, it would have been a sermon on the proper university spirit.

There is no reason why this should not be true of our university. Let us hope that the day is not far distant when the statement that a man is a graduate of the University of California, no matter from which department, will be as much a token of good faith to his fellow graduates as a Masonic grip. In these days of the almighty dollar, a fleeting possession, any effort which tends to draw together educated minds necessarily develops a true nobility of character, an earnestness of purpose, and an ever-increasing desire to lead a life of usefulness.

Your examinations past, your diplomas won, you will now go forth to make a place for yourselves in the world as free and unguided agents. Should opportunity present itself, travel and observe, both at home and abroad, for travel and observation are two great educators; but I beg of you not to go abroad for the sole purpose of procuring foreign diplomas, and thereby weakening the standing of our home institutions in the eyes of foreign nations. It is not necessary that you should subject yourselves to further examination in order that you may add to your knowledge. Remember that you are doctors of medicine of the University of a great State; permit no other body to test your right to the privilege of practising your profession, for this is the sole purpose of examinations. Study, attend the lectures, visit the clinics, and do not forget that there is much to be seen outside of medicine which will tend to broaden your minds and better fit you for your life's duties.

When you begin to practise you will find a great lack of balance between the supply and demand in your chosen profession, for it has been clearly demonstrated that there are many more doctors than are necessary. The competition is, therefore, great in medicine as in other professions; and intrigue, dishonesty, and charlatanism are rife, most rife unfortunately where you least expect to meet it, and where it is surrounded by crafty methods and financial success. When you are brought in contact with these obstacles do not become faint-hearted, nor allow yourself to do that which you despise in others, but by a conscientious attention to duty, and an honest endeavor to do the right as you see it, be sure that you must gain the confidence and trust of all who know you.

In your relationship with your professional colleagues, be courteous to all, but try to gather about you a few trusted friends who alone are within the inner circle of your lives, and upon whom you may call with perfect confidence in time of necessity, feeling that you will receive true and honest counsel.

Never refuse to give charitable advice when it is needed. Do your full duty by your patients, but see to it that they do their duty by you. Start out with the absolute knowledge that there is no profession more taken advantage of than that of medicine. Try to protect yourselves; you can do no more.

In spite of competition, intrigue, dishonesty, charlatanism, and ingratitude, the medical profession is the noblest of all. There is a grand host of honorable gentlemen in its ranks; join them, and let us all work hard in order that we may gain a niche in the Temple of Æsculapius.

THE CONDITION AND NATURE OF THE MEDICAL PROFESSION.

A Lecture, Introductory to the Course on Principles of Medicine, at Cooper Medical College, San Francisco, 1896.

By J. H. WYTHE, M.D., LL.D., Acting Professor of Principles and Practice of Medicine.

If an intelligent traveler from the planet Mars, or other distant sphere, should visit our land for the purpose of studying our civilization, he would certainly think, until closer investigation undeceived him, that we were a very sickly or a very credulous nation. The number of medical practitioners of all sorts would certainly surprise him. The medical register would show him that about one in 400 of the entire population is licensed to practise medicine. Counting four to a family, this gives 100 families to each physician.

Further observation would prove that the druggists, almost without exception, not only dispense but prescribe medicines over their counters, contrary to law. In nearly every apothecary's store, cheap cures are displayed for almost every ill that flesh is heir to. In many of our business streets, also, will be seen signs of cancer curers, guaranteeing to remove the disease without the use of the knife; or the advertisements of tapeworm doctors, who exhibit rows of bottles full of celluloid parasites. Nearly every newspaper contains scores of advertisements of quack medicines, or of practitioners, designed to catch the eye and empty the pockets of the credulous and unwary. Even our medical journals are filled with the names and praises of proprietary remedies, whose composition is generally unknown, and the offices of physicians are regularly visited by traveling agents representing pharmacists who are zealously striving to render popular this royal road to medical skill. It is so much easier to give some elegant preparation which professes to be suitable to certain diseases than it is to examine and know the pathological conditions of a patient and prescribe intelligently, that the ignorant or idle in the profession are entrapped into a routinism which is fatal to progress, while the public, misled by such examples, is encouraged in the promiscuous use of doubtful drugs.

The causes which make this degradation of medical practice possible, are two-fold. First, the general ignorance of the community respecting the elementary facts of physiology and pathology. Ignorance of scientific truths is usually associated with an obstinate pride of opinion, as well as with a weak, yet possibly honest, credulity, which is ever ready to enlist in some new scheme of plausible or of mysterious pretension. Hence we find people who, for a time, profess to believe in homeopathy, then in some proprietary nostrum, or the water-cure. Or they are captured by some electrical appliance, so-called, although it may exhibit no principle of electrical science whatever. One of this sort—a man of considerable intelligence in many things—was speaking to me some time ago about rheumatism, of which he said he had been a victim for years, but he had found a certain cure for it. "You may think it simple," he said, "but I have not had rheumatism since I carried that"—pulling a dried potato out of his pocket. I thought it a good illustration of faith-cure, but only a few weeks after I met the same gentleman perusing a quack advertisement for the cure of rheumatism. He told me he had used one bottle of the medicine and was going to get another, as it was a sure cure. Such restlessness of character, such flightiness of imagination, is by no means uncommon, and is usually associated with the most bigoted pride of opinion, which asserts independence of all science or established belief. The vanity of such people is only equalled by their imbecility and ignorance.

The general outline I have given you is, however, but a superficial view—such as I have supposed a traveler from Mars might take at first, until he had examined the subject more closely. It represents the ignorance and commercial spirit which exist in the community, rather than the medical profession itself. Your presence here, in this noble structure, erected by the unselfish generosity of its founder, who still lives and teaches that there is something more excellent in medicine than mere money-getting—your presence here, I say, proves that you have an estimate of your chosen profession which ought, and I doubt not will, lift you up to a plane of mental and moral excellence as far above the charlatan and ignoramus as heaven is from earth

True medical science was never more exalted nor more influential than in the present age. It is an age of wonderful activity. Its mental efforts are intensely energetic, and its results have been great discoveries and practical applications of knowledge for the common weal. In no department has this been more evident than in medical science. The use of the thermometer, the stethoscope, the microscope, and chemical analysis, have greatly assisted the diagnosis of disease, while concentrated medicines, the hypodermic method of medication, the use of anesthetics, and the antiseptic method of antagonizing disease germs, have almost revolutionized medical treatment. In all civilized countries, hundreds of well qualified physicians are seeking, in laboratories and by clinical research, to extend or to simplify our knowledge of diseases and their remedies.

The effects of this activity are already seen in the diminishing death rate. A recent medical journal states that the late Dr. Parkes fixed 17 per 1,000 as the mortality incident to human nature—or the possible minimum death rate—and in his time even that figure seemed Utopian. But in London the death rate in 1894 had fallen from 20.5 for the decennium 1881–90, to 17.7 per 1,000, and last year, 1895, when the mean was 19.7, there were sanitary areas in the great metropolis which gave a death rate of 14.5 and even of 12 in the 1,000.

Among the flickering flames and *ignes fatui* of ignorance and greed, true science holds aloft the electric light of truth as a beacon which none can mistake. Like the celebrated statue in New York harbor, of Liberty enlightening the world, standing on a pedestal of solid rock, and holding a brilliant torch far above the feeble lamps of passing vessels, as well as those on the shore, so medical science stands firmly on its base, erected by the knowledge and skill of ages, and illumines all who look above that which is low and sordid, and who love truth for truth's sake.

The aim of medical science is purely benevolent. It is to relieve human suffering and to preserve human life. Physicians are not traffickers for gain, offering so much medicine or service for so much money. Nor are they ambitious aspirants for fame. It is true that the principles of Holy Writ, "Thou shalt not muzzle the ox that treadeth out the corn," and "The laborer is worthy of his hire," apply to medical as well as other labors, and a diligent student reasonably expects to occupy an honorable position among his fellow men, but these are incidental and secondary motives in a profession whose highest ambition is to do good. The majority of tradesmen may think otherwise, and an opinion is quite prevalent that medical skill is a gift of nature, and a possession to be traded with. Hence the tendency to patronize natural bone-setters, clairvoyants, special blood purifiers, or the seventh son of a seventh son. Those of you who have been initiated into medical pursuits, know full well that nothing but close application to study will insure success, and the most elevating and praiseworthy motive for such study is the desire to do good to mankind.

The true physician renders his services whenever they are needed, and the compensation depends largely on the patient's ability to pay. No class in the community do as much charity work as physicians, and it is generally unheralded and unknown to the world at large. It is not charity, however, for a physician to work for nothing, or for half pay, when his patients are able to compensate him. Much of the financial difficulty of the profession is to be attributed to the folly of physicians themselves. For the sake of getting practice many resort to reprehensible curtailing of professional compensation. I am glad that medical societies are protesting against lowering the fee for life insurance examinations. I wish they would also protest against physicians hiring themselves to societies for a mere trifle.

I have referred to medical science as if it were a single department of human knowledge, but it is only one as a tree is one, with its numerous branches, or as a splendid palace is one, with its various halls and chambers and corridors. Knowledge pertaining to medicine is the accumulation of many minds through many ages.

According to Ebers, we have medical papyri from Egypt, reaching back to the eighteenth dynasty, 1,600 years before Christ, representing the medical professsion of that early period as thoroughly organized and well informed. A professional high school was attached to the temple of Seti, at Thebes, and those who were disposed to study medicine, after passing the examination for the degree of Scribe, were sent to the celebrated medical faculty at Heliopolis, whence they returned to Thebes, endowed with the highest honors in surgery, in ocular treatment, or in any other branch of their profession.

The age of Pericles, in Greece, was the most advanced period of

Athenian history. It was an age of philosophers, orators, and poets. To this period belong the writings of Hippocrates, the contemporary of Socrates. On account of his abilities and knowledge, and his lucid and complete account of the natural history of disease, he has been styled the father of medicine. The inhabitants of Argos voted him a statue of gold, and the Athenians conferred upon him their highest honors. The works of Celsus, in the first century of the Christian era, show a marked progress in medical science and art since the time of Hippocrates. Galen, in the second century, commented upon the works of Hippocrates with such fidelity to nature that he became the chief medical authority for 1,300 years.

The overthrow of Roman civilization by the northern barbarians, and the burning of the vast Alexandrian library of 700,000 volumes when the Saracens captured Alexandria, in the year 640, transferred the seat of knowledge to Arabia and Persia, and for more than 600 years, down to the close of the fourteenth century, the history of medicine may be termed the Arabic period. It was based upon translations of such Greek authors as had escaped the flames. In the eighth century, Bagdad could boast of its public hospitals and laboratories, and its thousands of students.

As in the Grecian torch-race the burning brand was passed from hand to hand throughout the course, so medical learning has passed from nation to nation. From the Arabian school medical science was transmitted to Europe by Jewish physicians, who were greatly esteemed, and by whose means the light of our science was kept alive in the West during the dark ages.

During a large portion of the middle ages the celebrated school of Salerno, in Southern Italy, was the center from which medical science radiated into Western and Southern Europe. This school required 7 years' study of physic, and a strict examination in Galen's therapeutics.

In the sixteenth century, the anatomical work of Vesalius, and Harvey's discovery of the circulation of the blood in the seventeenth century, made possible the classic works of Sydenham, Boerhave, Haller, Cullen, Hunter, Bichat, and scores of others who have enriched our profession.

In the present century, the names of Dupuytren, Velpeau, and Pasteur, in France; of Abernethy, Brodie, and Klein, in England; of Syme, Liston, and Simpson, in Scotland; of Colles and Hamilton in Ireland; of Graefe, Rindfleisch, and Virchow, in Germany; of Scarpa, Semmola, and Porta, in Italy; of Rush, Gross, and Davis, in our own country, with scores of others, will live long in grateful remembrance.

The ruling principle of scientific medicine—to seek and welcome truth from all sources—makes exclusive dogmas impossible to it. There were indeed many medical sectaries in the past, which is only another way of saying that there were many inquisitive but imaginary minds, whose genius impressed their ideas upon their contemporaries. Human nature is so constituted that the prevalence of a dominant idea may mislead sincere minds and become epidemic among great numbers of men. There is no security against misleading tendencies save by rigidly basing our theories upon demonstrable scientific truth. If we yield it an imaginary fulcrum, Fancy can move the world, or the universe; but the result will be illimitable chaos. Theory piled upon theory, as men invented cycles and epicycles in the old philosophy to account for the movements of the heavens, can never lead to elementary truth, or to a knowledge of the actual cosmos.

The history of medical science is full of instances of speculations which rest wholly on theoretical or imaginary grounds. Under the influence of the Pythagorean theory, that fire is the prime origin of all matter, Hippocrates considered fever to be an increase of the original heat, or life principle, and this conception, variously distorted, was influential for nearly 2,000 years. The Humoral theory, as it is called, rested upon the idea that the four elements, fire, air, earth, and water, with the combination of four states or qualities, heat, cold, moisture, and dryness, gave rise to the four fluids or humors of the body, blood, phlegm, bile, and black bile, which produced the four temperaments, which in their turn tended to the excess or defect of the humors. The Solidists, on the contrary, considered disease as an increase or deficiency of tone in the solid fibers of the body. The Chemical school sought for the essence of disease in a sort of chemical fermentation of the fluids, while the Mechanical school regarded the body as a machine, subject only to physical laws, and disease as derangement in the system of tubes, etc., of which it is composed. The Homeopathists consider diseases and remedies to be dynamical—whatever may be meant by that term—and claim that this power is increased in remedies by trituration and dilution. The Brunonian system traced all diseases to increased or defective irritation, and Broussais fixed upon irritation of the intestinal canal as the starting point of various complex symptoms.

It is the glory of modern medicine, that while it does not utterly condemn theorizing, it teaches that it can only be provisional, and that all real progress must rest upon actual discoveries. Up to the present time, nothing has assisted a scientific knowledge of disease so much as the study of normal and pathological histology in connection with physiology and clinical observation. We have learned from it that morbid phenomena do not differ from normal phenomena, since each morbid manifestation has its analogue in physiological conditions. We have learned, also, that there are no special pathological forms. It used to be thought that peculiarly formed cells exist in tubercle, sarcoma, and cancer, but the microscope has proved this to have been a mistake. There is no important difference between physiological and pathological laws; the differences are in the conditions under which the forces and substances of the body operate. Thus the work of the physician is removed from the sphere of speculation to the modification of the conditions of morbid life. This modification is dependent upon experimental research, so that there is no need to draw upon the imagination for facts if we are diligent in the study of our science

Speculative imagination is the prolific source of all quackery whatever, in medicine, in philosophy, and in religion. The magnetic baths of Mesmer, Perkins' metallic tractors, the old Grecian cosmogonies and their revival in modern times, electro-biology, and spiritualism, with a host of similar delusions, have no other foundation. Such theories are sometimes associated with facts, since some truth may exist in the wildest scheme of error, but such association only renders the speculations more delusive.

The rapid sketch I have made of the progress of medical knowledge shows it to be a river that is fed by numerous rills. It is also a treasure increased by the labors of many, and committed to its graduates for use and increase. It is no solitary conception, nor exclusive dogma, starting from the genius of a single mind, and carried out by its followers. It is truth respecting the body and mind of man, as it has been filtered through the history of ages.

In the lectures of this department we shall discuss the qualifications and ethical principles necessary for one to take a place, and retain it, in so honorable and useful a calling as that of medicine, as well as those general principles respecting disease itself, which lie at the foundation of successful practice. At the entrance of your chosen profession, you see rising up before you, on one side the pillars of didactic and experimental study, and on the other side those of clinical practice in medicine and in surgery. The general principles, which we shall consider form the arch between them, and the ethical qualifications of the physician himself, the keystone which binds all the parts together.

In closing this lecture, I will try to give you my conception of the ideal physician and surgeon. He is a minister to human need in time of greatest suffering, or of greatest danger. His acts, and words, and even the expression of his countenance, are closely scrutinized, and have immense influence. Through the windows of his soul nothing but the light of truth should ever shine. If he is worthy of the name he bears, he employs his talents, his study, his time, and his best efforts for the good of others. He is deterred by no obstacle, shrinks from no danger, and spares no pains, to save life, or to relieve suffering. He should have a sound mind in a sound body. An eagle's eye, a lady's hand, and a lion's heart, was the old description of a good surgeon, but these are not possible to a shattered bodily frame. Every habit of life, therefore, which impairs the bodily vigor, is laid aside by him who would excel in his profession. He will maintain the courtesies of a gentleman on all occasions, avoiding everything rude, vulgar, or profane.

He is also a man of general information. His qualifications in the healing art will be rightly judged by his proficiency in this respect. As a man of liberal education, he is supposed to be familiar with the leading facts and principles of science, literature, philosophy, and the arts. Gross ignorance of these things will, as a general rule, be considered evidence of neglect or idleness, and consequent incapacity. His intellect should be clear and not mystical, nor easily mystified. He should be accustomed to take a comprehensive or bird's-eye view of every subject he contemplates, have delicate esthetic perception to be able to detect the least want of harmony or proportion, and be of sound practical judgment, that he may draw correct inferences.

As to his professional knowledge, he should consider, not what is old nor what is new, but simply what is true. To attain this knowledge of truth, he keeps fresh in his mind the fundamental principles of anatomy, physiology, and chemistry, and constantly applies them to his therapeutics and practice. He keeps fully abreast with the researches and discoveries of others, and spares no pains to provide himself with the means of testing their truth. With him science and experience go hand in hand, and before them disease, and often death, retires.

His heart is warm and full of courage, yet tender, sympathetic, generous, and above all, religious. He is incapable of a mean action. He acts under a sense of responsibility to his Creator. He is influenced by love to God and charity to all mankind. Knowing that his best efforts will be fruitless without the blessing of heaven, he neglects not to ask Divine assistance for his professional as well as his private duties.

Such is my ideal of a good physician. Such have often shed luster on our profession. With untiring industry, unostentatious charity, and unaffected piety, such have lived on earth to bless mankind, and have been followed to the skies with the benedictions of all who knew them. Let us follow such examples, and we shall have the satisfaction of knowing that we have not lived and labored in vain.

A CLINICAL STUDY OF RACHITIS IN CALIFORNIA.

By **Harry M. Sherman**, M.A., M.D., Orthopedic Surgeon to the Children's Hospital, San Francisco, Cal.

Read before the Medical Society of the State of California.

I feel I am entitled to make an explanation, and to offer, at the same time, an apology for the paper I am about to read. The explanation is this: About 10 years ago I took charge of the orthopedic service at the Children's Hospital in San Francisco, and, while not surprised to see in general about the same set of cases that I had been in the habit of seeing in similar hospitals in the East, I was especially surprised to see rachitic deformities, and to have to do, among my earlier operations, osteotomies for their relief. From seeing the severer types, I began to look for the medium types, and finally for the milder types of the disease, and I always found them, though never in any large percentage until the years 1894 and 1895. In these two years I did see a very large percentage, as I shall show by my figures; and it was because of this fact that I selected rachitis as a subject for a paper, and begged permission to present the paper at this meeting. It was not possible for me, practising chiefly orthopedics in a comparatively small city, to see a sufficiently large number of cases of children's diseases in general to develop reliable statistics, and so I addressed each member of the State Medical Society, asking his assistance in the study of the question.

Of 308 circulars sent out, 181 have been unanswered. Of the 127 answers, 21 were of no value as carrying definite information; and this left but 106 answers on which to base any opinions. This is rather a small number upon which to base any authoritative statement, but such information as was offered I have tried to use to the best advantage.

I must further say that I have no new theories, no extraordinary facts, nothing whatever above the commonplace to say. I am to tell an old story, with as much local coloring as I can give it, hoping thereby to call your attention anew to a subject that I am sure is of vital interest to the children of our State.

The history of the disease, as it has presented itself to me, is easily and briefly told. It is abstracted from the record books of the Orthopedic Clinic of the San Francisco Polyclinic, and from my own case books. In each instance I have counted only cases under 8 years of age, and the percentages give the number of these cases that were plainly rachitic, either actively or showing marked evidences of having recently had the disease.

The records at the Children's Hospital, Orthopedic Service, have not been drawn on, for the cases there had frequently been first to the Polyclinic, and they represented only the recovered cases of the severer types that required operative correction of bone deformities.

Orthopedic Clinic, San Francisco Polyclinic—Children under 8 years of age.

Year.	Total Cases.	Rachitic Cases.	Ages.	Percentage.
1890	22	5	1½ to 4 years.	22.72
1891	45	7	2 to 5 years.	15.5
1892	68	6	1 to 4 years.	8.8
1893	51	4	1 to 5 years.	7.8
1894	50	12	2 to 6 years.	24
1895	52	17	1 to 6 years.	32.6

It would have been very easy to have overlooked this increase in the percentage of rachitic cases if I had not been having the experience of a similar increase in my private practice.

Personal Cases—Children under 8 years of age.

Year.	Total Cases.	Rachitic Cases.	Ages.	Percentage.
1890	17	1	4 years.	5.7
1891	33	1	6 years.	3
1892	33	4	1 to 5 years.	12.12
1893	32	2	2 years.	6.3
1894	43	10	1 to 7 years.	23.25
1895	21 (6 mos. prac.)	10	1 to 5 years.	47.61
1896	14 (3 mos. prac.)	6	2 to 3 years.	42.85

Now, I draw my cases from exactly the same sources as the other medical men practising in California, and their experience, as contained in their replies to my circular of inquiry, I have tabulated as follows:

In reply to my question, "Have you seen a relatively greater number of cases of rachitis in the past two years?" 75 answered "No." Of these 75, 14 were engaged in special practices, which prevented their seeing cases of general medicine, and 7 had retired from active practice; 54 were in active practice, and were distributed through the State as follows: Auburn, 1; Santa Barbara, 2; Dunsmuir, 1; Sacramento, 5; Oakland, 5; Alameda, 2; Vallejo, 1; Lockeford, 1; Riverside, 1; Banta, 1; Jackson, 1; Upper Lake, 1; Yreka, 1; Saint Helena, 1; Anaheim, 1; Sierra Valley 1; Stockton, 1; Menlo Park, 1; Santa Rosa, 2; Los Angeles, 1; Fort Jones, 1; San Diego, 1; Sausalito, 1; Sonoma, 1; Ventura, 1; Placerville, 1; Redwood City, 1, and San Francisco, 15. I have been obliged to include in this list both those who answered simply "No" and those who emphasized the negative by saying that they had never seen a case during many years of practice in California.

In answer to the same question, 37 replied that they had not seen an increase, but had seen about the usual number. These were distributed through the State as follows: San Diego, 1; San Francisco, 15; Los Angeles, 4; Livermore, 1; Antioch, 1; Santa Clara, 1; Sacramento, 3; Marysville, 1; Dixon, 1; Grass Valley, 1; Ione, 1; San José, 2; Berkeley, 1; Stockton, 1; Woodland, 2; St. Louis, Mo., 1.

It is noticeable that San Francisco, Sacramento, Stockton, Los Angeles, and San Diego appear on both these lists of distributions; and it has not been the exception to have diametrically opposite expressions of opinion from two men living and working in the same community. The cases reported in this group of replies were usually under 6 years of age, though one was mentioned as being 16.

In reply to the question regarding the type, very few counted their cases, but there were 18 references to mild cases, 13 to medium cases, and 10 to severe cases. Two deaths were reported; and, from San Diego, Edwards mentions having seen several cases of scurvy, which he could with difficulty differentiate from acute rachitis.

In reply to the question regarding the manner in which these rachitics had been fed, there was the same failure to count cases on the part of the respondents. Eleven replies mention bottle-fed children (cow's milk?); four mention a combination of the breast and bottle, and twenty mention children fed on proprietary infant foods, but these numbers do not refer to specific cases of rachitis.

The answers to the question regarding the proprietary infant food most frequently used were quite impossible to tabulate. All the foods on the market were mentioned, and it would seem that these vary in their popularity in different places, but this is a matter of very little moment.

The question as to the specific causation of the rachitis in the cases reported brought out general answers. Nineteen replies quoted improper food and improper feeding as the chief cause of the disease; 8 replies referred to bad hygiene, and 4 to heredity.

Fifteen replies stated that the writers had seen a relatively increased number of cases of the disease, and their distribution in the State was as follows: San Francisco, 7; San José, 1; Sissons, 1; Oakland, 2; Alameda, 1; Auburn, 1; Red Bluff, 1; Berkeley, 1. Of these, San Francisco, San José, Oakland, Alameda, and Auburn have appeared in one or both of the previous distribution lists.

The cases reported in this group were usually under 6 years of age, but the number of cases is not given. All types were represented; the mild predominated, with the medium and severe in about equal number. There were 5 reports of breast-fed cases, the number of cases not given; there were 5 reports of bottle-fed cases (cow's milk?); there were 2 reports of children fed on a combination of breast and bottle; and 11 reports of cases, number of cases not given, fed on proprietary infant foods. Again, all the foods were mentioned, Dr. Emma S. Merritt, of San Francisco, stating that Mellin's food and condensed milk were, in her experience, the favorites.

In regard to etiology, 12 cited improper food and improper feeding; 7 quoted bad hygiene, and 3 heredity. One opinion referred the causation to deficiency of lime in the water, and noted improvement in the condition when lime salts were given.

In the replies to the question regarding etiology, the chief factors were plainly considered to be improper food, bad hygiene, and heredity. I do not think this last named should be included. Rachitis is a disease wholly incidental to the circumstances of life; a girl having rachitis, recovering, and later as a woman bearing children, will not, because of her past ailment, bear rachitic children; if they are born rachitic, it will be because of some condition of the mother during pregnancy which interfered with their proper intrauterine nourishment; if they become rachitic after birth, it will be because of the operation of some of the usual causes, and not because their mother had rachitis in her own childhood.

Bad hygiene was mentioned in 15 replies, and in a general way, as a cause, but in many others it was specifically set aside as not being operative in California. W. A. Edwards, of San Diego, says: "In Southern California we practically have no bad surroundings, over-crowding, absence of fresh air, or bad hygiene; the poor live outdoors the year round." And yet he has said, in reply to another question, "I always see a great many cases." B. M. Gill, of Dunsmuir, claims for Northern California the same qualities which render bad hygienic causes inadmissible for rachitis in California. One thing, I think, may be freely granted: the climate, plus the social and economic conditions of life in California, render bad hygiene an unnecessary, though it may at times be an active, cause of the disease.

By far the greatest number of opinions advanced gave improper food and improper feeding as the chief cause of the disease. Dr. Emma S. Merritt, of San Francisco, says: "The chief cause seems to me to be improper food. I think mothers are apt to overfeed, rather than give insufficient food. In addition to proprietary foods, children are allowed to have the 'table' food of adults at too young an age. Of course, in many cases, bad hygiene is an important factor, but in my experience, improper feeding stands out preëminently as the chief factor in the production of rachitis in California." Wm. Fitch Cheney, of San Francisco, says: "So far as I could determine, bad feeding was mainly to blame." F. W. D'Evelyn, of San Francisco, says: "Chief causes, in order of causation: (1) Improper diet. (2) Bad hygiene. (3) Prenatal, syphilitic malnutrition, chronic alcoholism, family degeneration." H. W. Smith, of Sissons, says, of 4 reported cases: "Improper food; hygiene was good in all cases." C. G. Bull, of Alameda, says: "The food, most of the cases having used condensed milk, a few cows' milk. In the breast-fed the mothers were delicate, sickly, or tuberculous, and the milk of poor quality."

My own experience agrees with these statements, and I do not think the exact cause is difficult to find. The proposition that the proper food for a baby is it's mother's milk is undeniable. Failing to get this, the child should have the nearest possible approximation to it. What does it actually get? The failure of the replies to my note of inquiry to state the number of the cases the different writers had seen, is again a stumbling-block, but there were 52 references to the manner in which the cases seen had been fed, and of these 30 referred to feeding by "foods," 6 to feeding by a combination of the breast and the bottle, and 16 to bottle feeding. Five mention cases of breast-fed rachitic children.

Dr. Adelaide Brown gives the following notes of one of these last cases: "Female baby, first child, breast-fed, 8 months old at the time of observation; had a small appetite and poor digestion and rachitis of a mild type, the most marked symptom being profuse head sweating. The mother had metrorrhagia, and was anemic, but secreted large quantities of thin watery milk. The child would nurse but three or four times in the 24 hours. Stopping the nursing and feeding the child on cow's milk, modified according to Rotch's formula, resulted in improvement in every direction." Dr. Bull, already quoted, refers to 4 cases of similar etiology, and I believe that in all cases of breast-fed rachitic children, the mothers will be found to be ill, or again pregnant while still nursing, or to be nursing too long, say 12, 14, 16, or 18 months, and to be in no case supplying a proper food for the child.

Of the references to children not breast-fed, by far the largest number, 30 out of 52, were to "foods"-fed children, and as the reports were in most instances general rather than specific, I will not attempt to tabulate them. In fact, the infinite variety of method in infant feeding, renders it exceedingly hard to classify any series of cases. I have memoranda of the dietaries of 24 of my 34 cases, and they are as follows:

Three breast-fed from 1 to 6 months, then Mellin's food. One breast-fed 4 months, then Reed & Carnrick's food. Three breast-fed 2 to 4 months, then condensed milk. Two breast-fed from 1 to 2 months, then cow's milk. Three breast-fed from 1 to 6 months, then gruel and milk. One breast-fed 3 months, then given all the infant foods. One was fed on cow's milk, but rarely got out of doors into the sun. One was fed on gruels and cow's milk from birth. One was fed on condensed milk from birth. One was fed on condensed milk and Mellin's food from birth. One was fed on Nestlé's food from birth. Four were fed on Mellin's food from birth. One was fed on gruels, then had a wet-nurse, then Malted Milk, and finally sterilized milk. One was fed on various foods and led a life of irregularity in regard to sleep and out-of-doors, etc.

In this little table 13 mothers started out well, nursing, and then failed after a short time, condemning their children to every possible dietetic whim or fad of their own or of their friends, or to the not entirely disinterested advice of some druggist, or to the advice of a physician which afterward proved to be ill-judged. Eleven nursed their children not at all, but began at once to see which of all possibilities the child would tolerate best. I have, among my own cases, no instance of rachitis in an entirely breast-fed baby.

The question as to how these different foods differ from woman's milk of good quality, and why they are insufficient for the child, is easy to answer. I will quote from, and at the same time refer to, Albert R. Leed's chapter on "The Chemistry of Milk and of Artificial Foods for Children," in the "American Text-book of the Diseases of Children." These comparative analyses of cow's and woman's milk are given:

	Sound Dairy Milk.	*Woman's Milk.*
Reaction	Feebly acid	Persistently alkaline
Specific gravity	1.0297	1.0313
Bacteria	Always present	Absent
Fats	Average 3.75	Average 4.13
Lactose	Average 4.42	Average 7
Albuminoids	Average 3.76	Average 2
Ash	Average .68	Average .2

Leeds sums up: "On an average, human milk has about ½ of 1 per cent. more fat than average sound dairy milk, and 2¼ per cent. more lactose. On the other hand, it has ½ of 1 per cent. less mineral matter, and, what is most important, *but 2 per cent. of albuminoids, or about half the quantity of cow's milk.*" There is a further fact of difference than this of degree, and that is one of kind. In each milk the albuminoids consist of casein and lactalbumin. The former is precipitated by acid, the latter by heat, but the coagula formed by the cow's casein are large and coarse clots, those formed by the woman's casein are finely divided soluble flakes. Moreover, there is about four times as much casein as lactalbumin in cow's milk, and about twice as much lactalbumin as casein in woman's milk. These differences in quantity will be referred to again in speaking of modified milk.

The food most frequently referred to in the replies I received, and also the one which had been most frequently used by my own cases, was Mellin's food. This contains, according to Leeds: Water, 12.37; fat, .18; albuminoids, 10.07; soluble carbohydrates, 68.18; gum, cellulose, 5.45; ash, 3.75. By mixing 3 parts of this food, 47 parts of cow's milk, and 50 parts of water, Leeds got the nearest approximation to woman's milk, with chief consideration of the albuminoids, namely: Fat, 1.86; soluble carbohydrates, 4.11; albuminoids, 1.89; ash, .43. Total solids, 8.29; and water, 91.71. This mixture had over 2 per cent. too little fat, and nearly 3 per cent. too little carbohydrates, while the albuminoids were a fraction of 1 per cent. deficient. Moreover, the carbohydrates were composed of lactose and maltose and dextrin, the former from the cow's milk, in smaller quantity, the two latter from the transformed starches of which the "food" is made, and in excess of the lactose.

Now of these the baby's digestion is arranged only for lactose, and though the ultimate destiny of all is transformation into glucose, I can find no evidence that the baby's digestive organs are able to as easily make that change in the cases of maltose and dextrin as in the case of lactose. Nor is it possible to deceive the digestive organs, so that they would act on maltose and dextrin, as on lactose, no matter how closely the analysis of the mixture, with all the sugars classed as carbohydrates, corresponds to the analysis of woman's milk. This shortage and substitution of sugars, with the deficiency in fat, should *a priori*, show this food to be an improper one, a fact that I believe to be abundantly demonstrated *a posteriori*. Dr. Leeds gives the analysis of condensed milk preserved with sucrose and diluted so that the albuminoids are 2.01 per cent. and the mixture then gives but 1.51 per cent. of fat, *i. e.*, about 3 per cent. short, and 2.08 per cent. lactose and 2.78 per cent. sucrose, *i. e.*, with the sucrose added, itself a questionable ingredient, the total amount of soluble carbohydrates is still over 1 per cent. short of what it should be. In that condensed milk which is preserved without added sugar, there is but just half the proper amount of lactose in the dilution. How can it be reasonable to expect a child to thrive, when the necessary food is withheld, as it is from all babies fed on these preparations.

Nestlé's food belongs to a class of foods "in which the dextrinized or malted flour has already been evaporated with milk, and which is prepared with the aid of water only." (Leeds.) One part of it and 6 parts of water give a mixture of the following proportions: Fat, .71; soluble carbohydrates, 6.82; starch, 6.14; albuminoids, 1.83; ash, .28; total solids, 15.78; water, 84.22. This is lacking 3.42 per cent. of fat—a small fraction of 1 per cent. of carbohydrates, but has very nearly the proper amount of albuminoids. It has, however, 6.14 per cent. of starch, an absolutely useless and certainly a harmful presence, and its carbohydrates are made up of others than the lactose alone. All the foods of this class—Nestlé's, Anglo-Swiss, Gerber's, American-Swiss, Franco-Swiss, Wells' Richardson's Lactated Food, Loeflund's Cream Emulsion and Malted Milk (this last a very popular article in San Francisco), contain starch in large amount, an ingredient quite indigestible by the infant, and which should never be in its dietary until the second year or fourth half-year of its life.

In regard to pure cow's milk—"sound dairy milk," or "milkman's milk"—the proposition in regard to its tendency to cause rachitis is not so clear. I have seen many children, notably in the practice of Dr. George Chismore, who have had nothing else, and have grown sturdily and well, with no ostensible evidence of the disease. It is certainly true that, in spite of its variation from the analysis of woman's milk, it is often a food that suits the child.

But while granting that cow's milk may very often fulfil all the requirements of a child, I am decidedly of the opinion that all children fed on condensed milk, or any of the proprietary foods, are potentially or actually rachitic in a greater or less degree, and that by just that much their general strength and their resistance to intercurrent diseases is lessened, and their best chances of health and life are denied them.

But if these artificial methods of feeding—at the present time, by reason of extensive advertising, the most obvious and easily accessible—are forbidden as harmful, and the child does not thrive on cow's milk, what food shall be given? I refer here only to nursing infants, for the feeding of older children is simpler; and even in the case of the infant it is hardly necessary to elaborate this subject. Modified cow's milk, so that the proportions of the major ingredients correspond very closely with those of woman's milk, is becoming, happily, a comparatively common article of the infant's diet, and hardly a city of even medium size can be found which does not possess a "milk laboratory." This method was originally used by Meigs, of Philadelphia, but has been so improved by Rotch, of Boston, that the *technique* and the resulting mixture are spoken of as "Rotch's Formula."

Cow's milk contains more albuminoids and less fat and sugar than woman's milk. The simple plan is to dilute cow's milk until the percentage of albuminoids in the dilution approximates that in woman's milk; then add cream and sugar of milk in amount to give the proper percentage of each in the mixture. Cow's milk is acid, and so is this mixture; therefore, an alkali, lime-water, is added in just sufficient amount to overcome the acidity and render the mixture properly faintly alkaline. Rotch's formula is as follows: Cream (20 per cent. fat) 1½ ounce; milk, 1 ounce; water, 5 ounces; milk sugar, 3½ drachms; lime-water, ½ ounce. This gives 8 ounces of cow's milk modified to correspond to average woman's milk. For the complete exposition of the subject I refer you to Rotch's "Pediatrics," which has been lately published. That this is a satisfactory food for infants I know from experience with it in many cases.

The treatment of rachitis deserves brief mention. The first point is to remove the cause, dietetic or hygienic, and this is almost always an easily accomplished matter. The one drug that has merit in the condition is phosphorus; and this I find is best given in oil, and I write my prescription so that the ordinary oleum phosphoratum of the pharmacopeia is added, in such proportions as I wish, to codliver oil. This is taken readily by the children, and borne well by the stomach. But I consider medication of less value than proper food and proper feeding and proper ordering of the hygienic surroundings.

Mild cases recover and are not apparently hurt by the experience, the medium cases often, and the severe cases always, bear marks of the disease in the skeleton; but these individuals, with deformed skeletons, may still live an average length of life.

It would be neglectful to close this paper without a reference to a sequela of rachitis; namely, scorbutus in infants. The journals have, in the past three years, contained reports of very many cases. I have myself seen but three cases. Dr. Mary Fletcher, of Alameda, has reported one case; Wm. Fitch Cheney, of San Francisco, another; J. Rosenstirn, of San Francisco, tells me he has seen three, and W. A. Edwards, of San Diego, reports that he has seen several which it was very difficult to differentiate from acute rachitis. My first case very nearly proved inexplicable to me, for I had not seen then any mention of the condition as scurvy, and I made a diagnosis of acute rachitis. But in reading up the latter subject I found the article by Barlow on scurvy, and the difficulty was overcome.

In all of my cases the children had been fed on the ordinary mixture of Mellin's food and milk, and the combination had been always sterilized. Heating to the boiling point precipitates the lactalbumin, and it is the change thus produced in this ingredient that robs fresh milk of its antiscorbutic properties. The process known as pasteurization, in which the temperature is not permitted to go above 170° F., avoids this coagulation of the lactalbumin, and at the same time sterilizes, so far as all living developed microörganisms are concerned. There are but few things so satisfactory as to watch the rapid recovery of a scorbutic child when a proper food is given and a small portion of orange juice is daily administered.

The chief fact learned from the little lists of this paper is that there is rachitis in California, and that, in spite of the optimistic opinions of many of those who answered "No" to my first question, there is quite a deal of it. In two of the replies that I received there are the acknowledgments that the writers may have overlooked cases, and this gives me the opportunity of saying that it is the rule for these cases to be overlooked unless they are so severe as to attract attention even from laymen. I know that until I adopted the practice of stripping every child that is brought to me, and of making the most thorough examination I knew how to make, I must have overlooked many cases.

The diagnosis of "general malnutrition" is often made, and yet the term means only a condition which is the result of some underlying cause, and that cause should be sought for, and, unless it is sought for and found, no really intelligent treatment can be instituted. I believe that often a rachitis of mild, or even very mild type, will reward such a search, and will give a direction and positiveness to the management of the case that will be a real comfort to the physician; for, after all, it is our imperfect knowledge of many things in medicine, and the vague and uncertain courses that we must follow under such circumstances, that causes us most worry, leads most to differences of opinions, and gives standing-room for all the curious tenets of the hosts of "pathies" that cluster around the science of medicine.

1303 Van Ness Avenue.

A CASE OF PUERPERAL SEPSIS, WITH AN EXTENSIVE MEMBRANOUS DEPOSIT IN THE GENITAL TRACT.

By B. M. Gill, M.D., Dunsmuir, Cal.

Read before the California Northern District Medical Society.

On the morning of February 6th I delivered Mrs. J——, multipara, of an apparently healthy girl baby, 15 days past term. Owing to some premonition I took unusual care in all that pertains to asepsis, making only sufficient examinations to determine the presentation. Labor was normal and easy. No laceration occurred, and the placenta was delivered in a brief time in perfect condition. A small amount of hemorrhage occurred with perfect contractions. Only a small *post-partem* clot occupied the uterus.

The patient was very fat and the skin dark, but she had gone through the period of gestation fairly well. The nurse informed me in the evening that she had applied the child to the breast twice during the day, and each time it had subsequently vomited quite badly. The urine had been voided and the bowels had moved, therefore I directed that she should not let it nurse any more until further developments.

At 4 A. M. I was called and found the child with a temperature of 105° F., weak pulse and apparently in great misery. About 5 drops of tr. opii camp. were given which the stomach immediately rejected. In less than an hour the child died suddenly, with all the appearances common to the opening of the foramen ovale.

On examining the mother I found the temperature was 102° F. No pain appeared except an occasional "afterpain." Thinking a possible early lactation was the cause no remedies were given.

Forty-eight hours after delivery she had a pulse rate of 150, with that peculiar lessening force but constantly increasing frequency common to severe septic conditions. Temperature 105° F. I immediately washed out the uterus and vagina with a 1:1000 bichloride solution, with an immediate reduction of pulse and temperature, so that in two hours the pulse rate was 108 and the temperature 103° F. Quinine and antipyrin were administered during the day, the uterus being again washed out in the evening. On the morning of the third day no evidence of lactation appeared. I again washed out the uterus and noticing some cheesy fragments, I gently curetted the uterus with a dull curette, and took away quite a quantity of the same cheesy material. Continued treatment with no perceptible gain. On the morning of the fourth day Dr. Smith, of Sissons, was called in consultation. On examination, the os was found completely covered with a distinct diphtheritic membrane, which seemed to be rapidly projecting downward. Vagina and vulva quite purple in color. Washed and curetted the uterus carefully, getting quite a quantity of the caseous material. Dr. Smith suggested tamponing the vagina with a loose tampon saturated with the following solution:

Glycerine	oz. iv
Acid Carbolic	grs. 30
Tr. Opium.	
Tr. Arnica	āā dr. ¼

On the morning of the fifth day the membrane had taken full possession of the entire vagina to the vulva, but already began to show signs of thinning in some places. Having administered various antipyretics with but little appearance of any special diminution of fever, which, by the way, never again ran above 104° F., I abandoned them all and gave whisky once an hour. First tried egg-nog, which disagreed, after which I used the pure article diluted. From the morning of the fourth day she had considerable mania and much tendency to insomnia. No opium was given after the fourth night, and then only two ¼ gr. morphine sulphate pills at intervals. Small doses of the mild chloride were given from time to time, and as a result large quantities of bile were eliminated.

Until after the tenth day the battle continued along the same lines when all symptoms improved, and with only a few drawbacks. She made a slight gain until the fifteenth day when she had three considerable hemorrhages from the bowels. None have appeared since. I will add that at the confinement not one spoonful of liquor amnii appeared. At the present time (March 5) she is rapidly improving in all directions, with every appearance of a fair recovery.

Note.—June 15. Patient made a good recovery, and, with the exception of a slight bilious attack, has since been in excellent health.

TRANSFIXION OF THE LEFT VENTRICLE OF THE HEART BY A SHARP WIRE, WITH A SECOND WOUND, PENETRATING THE WALL OF THE VENTRICLE.

By W. J. HANNA, M.D., Sacramento, Cal.

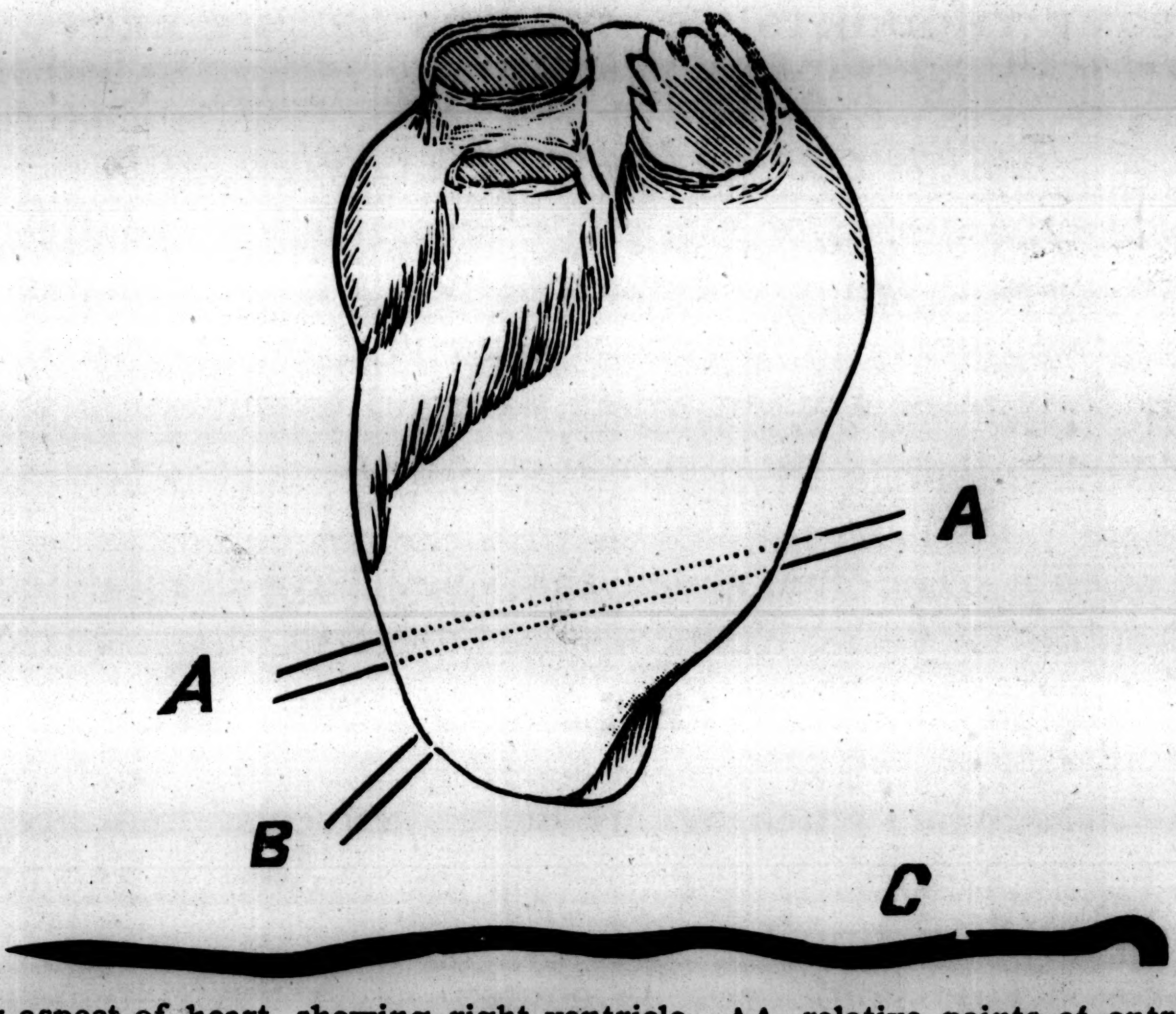
Read before the Sacramento Society for Medical Improvement.

Cases of wounds of the heart, both penetrating and non-penetrating, which have not proved immediately fatal are occasionally recorded. Their importance in a medico-legal sense has induced me to present the following case, with the accompanying specimen, to the Society:

John Craig, under sentence of death at Folsom State Prison, on the morning of June 11th, at 4:30 o'clock, introduced a piece of No. 10 galvanized iron wire, six inches in length, into the chest cavity, the point of entrance being one inch below and one-half inch to the right of the left nipple. Dr. Browning, the prison surgeon, was immediately summoned by the watchman, who in the meantime made an examination, and about fifteen minutes later found the wire protruding from the chest for a distance of two inches. It was removed, and measured six inches in length, the point being very keen from constant rubbing on the cell floor; the opposite extremity was slightly curved.

Upon the arrival of the doctor, the patient was found to be in a state of collapse, the pulse being imperceptible at the wrist. A sixtieth of a grain of sulphate of strychnine was administered, hypodermically, and soon after the patient began to rally and show signs of severe pain over the cardiac region, and he could hardly get his breath. The pulse soon became full and strong, running to 90 and remained so until the end.

Upon inquiry, patient stated that he suffered very little pain after the wire passed through the skin. He made a pad of the blanket and gave the wire a vigorous push. He could feel the heart moving the wire. He then gradually withdrew the wire for a short distance and by a strong effort forced it home. At this point he became unconscious and knew nothing until the attendant removed the wire. It is supposed that it was the last thrust that transfixed the heart.



Anterior aspect of heart, showing right ventricle. AA, relative points of entrance and emergence in left ventricle. B, second wound of left ventricle. C, wire with which wounds were made—actual thickness, one half length.

The subject continued in pain of a pleuritic character and was very restless, occasionally wanting to be lifted up to get his breath. Nothing more was given him for fear of ill effects upon the heart. At 9 P. M. he was given 30 grains of chloral, and slept three or four hours during the night. At 7 A. M. he was given 2 ounces of whisky, and between that and 10 A. M. 2 ounces more, when he was executed. The source from which he obtained the wire will always remain a mystery.

The autopsy showed the body to be in good condition. A punctured wound was found one inch below and one-half inch to the right of the left nipple. Upon opening the chest cavity, the pericardium was found to contain two ounces of blood. The apex of the heart showed two punctured wounds, one of which penetrated the ventricular cavity; the other, on a plane slightly superior and posterior, passed completely through the heart, the point where the wire emerged after traversing the cavity of the ventricle being plainly visible.

The heart's action was therefore maintained for fifteen minutes though wounded in three places, and literally impaled upon the wire. The length of time from the infliction of the injury until his execution was over 29½ hours.

426½ J street.

SOME THOUGHTS ON DISEASES OF THE RECTUM.

By J. A. MOORE, M.D., Hanford, Cal.

Read before the San Joaquin Valley Medical Society.

I believe the subject of the proper examination and treatment of rectal troubles, is not given the attention that it demands by the general practitioner. Often the statement of the patient that he is suffering from piles is taken, when a careful examination will reveal an altogether different pathological condition.

In the years that I have been giving special attention to these diseases, patients have often stated that they have been afflicted with rectal troubles for years; have consulted different physicians; but that an examination had never been proposed, nor an attempt made to properly diagnose the case.

The diseases for which we are most often consulted, are hemorrhoids, fissure or irritable ulcer, fistula, rectal catarrh, and that most intractable malady, pruritus.

The physician should not be content with the statement of the patient, but should in each case make a systematic and thorough examination.

The requisites for a proper examination are: A good light, good position of patient, and a good examining speculum. Possessing these, your examination should be systematic. I find the best position is that on the left side, with the legs and knees well drawn up, but some prefer the lithotomy position. An ocular inspection will reveal the presence of ecternal piles, exzema, ulceration, fissures, external openings of fistulas, etc. If we stop here, our work is but half done; we should next direct our attention to diseased conditions within the rectum.

Having lubricated my finger well with castor oil, which I find to be the best lubricant, I insert it gently within the rectum. By this means I can detect old, indurated hemorrhoids, a stricture of the gut, a foreign body, impacted feces, etc.

A good examining speculum is difficult to find. Prof. Mathews, of Louisville, has devised one for which he claims the best results, it being self-retaining. Either this or Kelsey's or Sims' will give as good results as any.

When we remember that most diseased conditions are found within the first two or three inches of the gut, we can readily see that the view afforded by the speculum will reveal nearly all pathological conditions of the rectum. We can determine in this manner whether there be internal hemorrhoids, ulcers, catarrh, and by careful inspection, detect the internal opening of a fistula, if there be one.

My method of treating external piles is as follows: First wash the parts with bichloride solution, 1:5000, or with carbolic acid solution, 2 per cent. Then after injecting cocain, catch up the tumor at its base with a pair of forceps, draw it out firmly, and divide the skin all around up to the mucous membrane on each side. Then throw a strong silk ligature around its base, tie it tightly, and cut off the tumor close to the ligature. Next, dust the stump with powdered acetanilid, which is all the dressing I apply. Should there be much pain following the operation, I direct applications of hot water.

In the treatment of internal hemorrhoids, I have employed only two methods, the ligature and injection.

In my hands the plan by injection has given satisfaction. I know that it has been largely used by the quack, but anything that I find to be good, I use, regardless of its origin. The formula I employ for injecting is as follows: Fl. ex. ergot 20 parts, glycerine 30 parts, carbolic acid 25 parts, and hot water 15 parts. I inject from 2 to 10 minims of this fluid directly into the pile; there is but little pain following, and the patient is usually able to continue his avocation during the treatment.

Some of these cases are complicated with prolapse, in which case I inject into the connective tissue on either side of the rectum, about 10 minims of a solution of ergotine.

The operation by ligature must needs be done under an anesthetic. With the patient in a good light, the sphincter should be divulsed, the tumors, in succession, drawn down, ligated and cut off with scissors. To secure the best results and the most rapid healing, as perfect antisepsis should be employed as the location and circumstances will admit. After the operation I irrigate the rectum with an antiseptic solution, apply a pad of absorbent cotton, and retain it with a bandage

On the third day the bowels are moved by an aperient, supplemented by an enema of hot water. A simple dressing of iodoform gauze and cotton, held in place by a bandage, constitutes the after treatment. The ligatures come away in 6 or 8 days. The rectum should be syringed out once a day, until the patient is discharged.

The treatment of pruritus is not very satisfactory. The cause should be sought, and, if possible, remedied. If it be from hemorrhoids, they should be treated; if from a fistula, it should be relieved. At times pruritus will be found to result from the so-called "pockets," which secrete a thin, acrid discharge, thus keeping up the itching. In this case a cure may be effected by laying open these little pockets, and applying pure carbolic acid on a probe.

I believe a number of cases depend on a rheumatic diathesis, and will require full doses of salicylate of sodium, or other anti-rheumatic remedy.

There are other cases which are clearly neurotic, affecting the inferior hemorrhoidal nerve endings. This form of trouble has taxed my ingenuity to the utmost. The application of carbolic acid solution in different strengths, of tincture of iodine, either pure or diluted, mercurial preparations, in solution or ointment, together with cleanliness, good hygiene, and nerve tonics, will constitute the best treatment in these cases.

While I believe that, by a proper understanding of the etiology of this disease or condition, a cure may be effected in a large number of cases, I would advise that you do not promise too much.

In a case I treated some time since, of several years' standing, I laid open a little pocket in the posterior portion of the rectum, touching it up with pure carbolic acid. This, together with cleanliness, the application of an ointment of calomel, and the internal exhibition of salicylate of sodium, effected a cure.

In the treatment of fistula I will say nothing about the operation by the elastic ligature, as I consider the method unnecessarily painful, besides requiring a long time to effect a cure.

The treatment by the knife has the objection, especially in women, of, at times, destroying the usefulness of the sphincter; a condition worse than the disease. However, if there is not too much inflammatory infiltration, and especially if the fistula be at the posterior portion of the anus, there is but little danger of incontinence.

To do the operation, the patient should be anesthetized, antisepsis carefully enforced, all the sinuses laid open, and the flaps cut away. At this stage, the back cut of Salmon should be made. The rectum should be irrigated with a 1:5000 bichloride solution, after which the wound is packed with iodoform gauze, a pad of absorbent cotton applied and retained by a bandage.

The subsequent treatment should be conducted with care, as on it depends, largely, the ultimate result. The first dressing should be removed on the second day, and the wound irrigated, either with the bichloride solution or one of carbolic acid. After the irrigation, the parts should be well dressed with finely powdered acetanilid, which will, I believe, be found quite as efficient as iodoform and much less objectionable. Care should be taken to see that the wound heals from the bottom, so that no sinuses remain.

The method pursued by Dr. Dudley, first performed, perhaps, by Dr. Frederick Lange, and also practised by Prof. Skeene, commends itself to my mind, as being the ideal treatment of fistula. It consists in laying open the sinus, trimming off all indurated tissue, and then uniting the surfaces with sutures, as in the operation for lacerated perineum.

I have only touched on a few of the important points of the treatment, as but little can be said of details. Very many of these cases can best be managed in an institution where one can have full control of his patient, that the detail of after-treatment may be fully carried out. I have only endeavored, by these rambling thoughts, to call the attention of the Society to the importance of this branch of practice.

MALARIA, SOME OF ITS COMPLICATIONS AND ITS TREATMENT.

By T. E. TAGGART, M.D., Bakersfield, Cal.

Read before the San Joaquin Valley Medical Society.

I am deeply sensible of the fact, that this subject is one of antiquity, concerning which most able writers have written voluminously. I will not, therefore, tire you with an extended essay upon the clinical history of the pathological conditions arising from malarial poisoning, nor a dissertation upon the bacillus of Laveran, but hasten to the salient features of intermittent fever as they have occurred to me during nine years of practice in the San Joaquin valley. I shall base the following remarks upon a four years' experience as physician to the Kern County Hospital.

Malaria: What is it? It is a "something" which enters the body from without, a *materies morbi* which we breathe, eat, and drink; the germ prevails more at night, the sunlight seems to destroy its properties. Historically, there is a popular opinion that Bakersfield has a form of malaria peculiar to itself and generally considered virulent;

the natural offspring of regions characterized by the presence of putrefying organic matter, under a high temperature. Owing, however, to the interest taken in sanitary measures for the prevention of diseases, and the increased facilities for drainage in and about Bakersfield, there are now but few cases of old time malaria presenting themselves. But in the more rural sections of the country we have an abundance of clinical material, yet I am glad to say they yield readily to treatment.

In the incipiency of the malady there is a decided inactivity of the organic functions and a retention of eliminative matter; this is followed by a routine of objective intermittent symptoms well known to all. When a patient is admitted to the hospital, my preliminary treatment is wholly and decidedly eliminative, unlocking the excretions and stimulating the secretions more nearly to those of a healthy action. To be more specific, I give a hot bath, first for its external asepsis, second for stimulating the circulation of the skin, thereby relieving the blood pressure of the internal organs and allowing a freer excretion of urea and other waste products. The patient is placed in bed and the way is paved for a more powerful agent, "old sweet calomel." I give it in decided doses for its undoubted adaptability to this condition, and I follow this with one or more of the saline sulphates, which, according to Forthergill and as I have repeatedly demonstrated myself, have a decided action as an hepatic stimulant.

The mild chloride has a germicidal effect, besides stimulating glandular activity throughout the alimentary tract. Do not understand that I adopt maximum doses as a routine course, but rather that I rely upon mercurous chloride as initiatory in preparing the system for the subsequent antiperiodic remedies. A favorite combination with me, and one that has a most beneficial effect by increasing the action of the skin, sustaining the nervous system and carrying on the eliminative action that is so essential, is a combination of calomel, phenacetin, salol, and sodium bicarbonate. This is given in doses varying according to the patient and the exigency of the case. The treatment is continued until the eliminative action has set in and the secretions have been unlocked. This is indicated by the flow of bile; the skin and tongue becoming moist.

When these symptoms present themselves, I commence with my antiperiodic, which is the sulphate of quinine, given in decided doses. I prefer an acidulated solution, but may give it in capsules, although there are cases in which I am loth to use a capsule on account of the insolubility of the gelatin. The main object, according to my idea, is to obtain a decided antiperiodic effect of the quinine as soon after the hepatic eliminatives have acted as possible, and before the next paroxysmal period. In cases that have come to my notice, where the practitioner has failed to control the fever or chill, I have found this failure due, either to a laxity in thoroughly arousing the functions and establishing eliminative action, or in not giving enough quinine to assert itself throughout the system. These principles strictly adhered to in the treatment, will rob malaria of its persistence; and will restore the practitioner to a feeling of confidence in himself and his ability to treat this most subtle hindrance to the cure of disease. Intermittent or remittent symptoms which do not yield to this treatment, may be regarded as being complicated with those of a continued type and demand treatment accordingly.

One of the complications which I have observed is peculiar, and having been unable to find any literature relative to it, I have made some investigations. It consists of a cerebral disturbance following the febrile exacerbation and the cases almost invariably prove fatal. One only, amongst a number I have observed, made a complete recovery. In two of the number, I was able to hold a *post-mortem* examination, and my diagnosis was confirmed to my entire satisfaction. The condition consisted in effusion into the fourth ventricle and arachnoidal spaces. The symptoms of this complication are those of brain pressure, plus malarial disease. I presume this condition may seem improbable, but as it has been thoroughly demonstrated that malarial poison may cause any morbid state that can be induced by acute or chronic inflammation or active or passive congestion, I therefore see no reason why this may not be a complication and a direct result of malaria.

I not infrequently encounter incipient albuminuria with extensive edema, a weak heart's action, and many symptoms pointing to a rapidly approaching Bright's disease of the kidney. I have concluded that the source of the difficulty was of a malarial nature. The trouble yields to calomel and antiperiodics, with such other remedies as the cases may individually require, and the patients remain free from their nephritic symptoms.

Many of the maladies in this valley, which oftentimes prove so obstinate to treatment, are so because of the malarial poison that insidiously lurks in the system. Overlooking that condition is the source of failure of successful treatment in many cases.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal., and
WM. FITCH CHENEY, B.A., M.D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal.

Therapy of Pruritus Vulvæ.—RUGE read a paper on this subject before the Gynecological Society of Berlin in March, 1896. He thought that the affection was almost always due to local causes, and that thorough cleansing of the external and internal genitalia would cure, even in the worst cases. In the discussion that followed, MARTIN warmly indorsed the views presented, but in addition advised that the pubes be shaved and sulphur applied. FLAISCHLEN thought that after thorough cleansing of the parts, a solution of nitrate of silver should be applied—generally 20 per cent. OLSHAUSEN said he believed most cases of pruritus vulvæ was due to vaginal disease, and still more rarely the affection must be looked upon as a pure neurosis.—*Centralblatt f. Gynäkologie*, May 2, 1896.

Erysipelas in Infants.—In using carbolic acid locally on infants, always be on guard against poisoning. The first evidence of poisoning is shown by the urine, which leaves a pink stain on the napkins after being exposed to the air for half an hour. J. LEWIS SMITH advises for a child from one to two years old the internal use of four drops of the tincture of the chloride of iron every three hours, either alone or combined with one of the preparations of cinchona; and externally, he recommends the use of an ointment of ichthyol, a drachm to the ounce of cold cream. High temperature should be reduced by the application of cold, externally—sponging, the wet pack, or the bath. Antipyretic drugs should be employed with great care, used only in minimum doses, and always guarded by a heart stimulant. For delirium, the best results are obtained by reducing the temperature, and if the delirium does not then abate, give bromide of potash, chloral, and, as a last resort, opium.—*Pediatrics*, May 1, 1896.

Pelvic Abscess following Labor.—L. J. HAMMOND, of Philadelphia, reports 4 cases of pelvic abscess resulting from puerperal infection. In the first case, the abdomen was opened on the eleventh day after confinement, and 10 ounces of pus removed from an abscess on the right side of the uterus; the patient made a complete recovery, and subsequently became pregnant again, passing through a normal labor and convalescence. The second woman was operated upon two months after childbirth, having been confined to her bed ever since delivery because of septic infection at that time; a quart of pus was evacuated by celiotomy from a left broad ligament abscess, and the woman ultimately recovered. The third case developed chills, fever, pain in the right side, and fetid lochia on the third day after delivery, and by the tenth day the evidences of pus formation in the right side of the pelvis were so plain as to warrant abdominal section. The right tube and ovary and three ounces of pus were removed, and the patient made an uninterrupted recovery. The fourth case was one that had been badly managed at delivery, with extensive laceration of cervix and perineum, not repaired. General peritonitis developed, and the symptoms indicated a most serious condition. The operator did not see the case until seven weeks after delivery, but in spite of her critical state he decided to open the abdomen. Two abscesses were found and evacuated, one within the broad ligament, the other above and posterior to the uterus on the left side. The patient died from exhaustion on the third day following operation.—*American Gynecological and Obstetrical Journal*, May, 1896.

SURGERY AND ANATOMY.

By T. W. Huntington, B.A., M.D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal., and
Geo. B. Somers, M.D., San Francisco, Cal.

Treatment of Hemorrhoids by Excision and Closure with Buried Tendon Suture.—Marcy gives the following directions for performing this operation: Fluid diet for a day or two previous to the operation; careful cleansing of the lower bowel by means of enemata; complete, slow, careful dilatation of the sphincter; plugging the rectum with a large loose pad of iodoform wool, to which a string has been attached for its removal; dissection on the line of the skin and mucous membrane until the external fibres of the sphincter are exposed; separation of the hemorrhoidal plexus of the vessels from the loose connective tissue; suture continuously through the base of the plexus, avoiding penetration of the mucous membrane; resect only pathological structures; close the tissues by continuous sutures over the denuded sphincter; seal with iodoform collodion. Defecation to be avoided for three or four days, and the parts are to be kept clean and dry; primary union without pain is the rule; the cure is permanent, and almost without exception the results are satisfactory.—*Denver Medical Times*, March, 1896.

Appendicitis.—In an account of a case of appendicitis operated on by Kocher, of Berne, and reported by Dr. Bellamy, occurs the following paragraph: "The incision was made in the usual line, the peritoneum retracted, a large fluctuating abscess was found involving the appendix and cecum, and extending well down on the psoas tendon. Professor Kocher now called my attention to one of the most interesting features of the case: the complete absence of omental and mesenteric adhesions, leaving the abscess in direct contact with the peritoneal cavity. The operator then said: 'The patient's condition is good, and we must not attempt to remove the appendix or open the abscess when such intimacy exists between an abscess and the peritoneal cavity as we have here, but we will introduce a large piece of iodoform gauze, carrying it as low down as possible, thereby setting up strong adhesions and establishing an artificial wall.' "—*New York Medical Journal*, March 21, 1896.

Strangulated Inguinal Hernia.—In an article by Dr. C. B. Lockwood (*Lancet*) several interesting points are made. Instead of cutting down on the hernial sac in the scrotum, he makes an incision parallel to the inner half of Poupart's ligament and half an inch above it. The advantages of this incision are: (1) It avoids the scrotum, which is notoriously difficult to cleanse or disinfect, hard to keep aseptic, and highly disposed to infiltration and accumulation of blood. (2) It brings the operator straight down upon the seat of constriction, whether it be at the external or internal opening. (3) It permits the application of a secure air-tight and pressure-exerting dressing. Again, on opening the sac, the fluid must be evacuated and the inside of the sac and its contents thoroughly disinfected with an antiseptic wash. Recent work confirms the fact that in most instances the fluid in the sac of a strangulated hernia is septic. Finally, should omentum happen to be present, great care must be exercised in pulling it down for purposes of liberating or ligating it, for there is danger of rupturing blood vessels at its attachment to the stomach.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By Wm. Ellery Briggs, M.D., Sacramento, Cal.

Technics of the Trial Case.—Dr. A. E. Davis concludes a discussion of subjective tests of the eyes by the following statement: (1) Correct the astigmatism first, if present. (2) Always begin the test with a *plus* glass and a *weak* plus glass, and *gradually* increase the strength, in order to avoid or overcome spasm of accommodation, bearing in mind to place the axes of cylindrical glasses at right angles to the lines seen plainest on the clock dial. (3) Place lenses in the trial frames in the following order: (*a*) plus cylindrical glasses alone; (*b*) spherical glasses in addition; (*c*) minus cylindrical glasses at right angles to the plus cylindrical glasses, if vision is not made perfect by a plus cylindrical glass alone and plus spherical glasses are not accepted in addition; (*d*) minus cylindrical glasses alone; (*e*) minus spherical glasses in addition; (*f*) plus cylindrical glasses at right angles to the minus cylindrical glasses, if vision is not made perfect by minus cylindrical glasses alone and minus spherical glasses are not accepted in addition. (4) If no astigmatism is present, plus spherical glasses are to be tried first; if not accepted, then minus spherical glasses.—*New York Medical Journal*, June 20, 1896.

Recent Progress in the Treatment of Malignant Disease of the Larynx. Dr. D. Bryson Delavan says there are three operations now well established for the treatment of malignant disease of the larynx: (1) Thyrotomy, with or without partial laryngectomy. (2) The Solis-Cohen method of complete laryngectomy (removal of the entire larynx, and the insertion of the severed end of the trachea to the external edge of the cervical incision). (3) Complete laryngectomy in case of extensive disease with glandular involvement. The author thinks well of the Solis-Cohen method: (*a*) Because it lessens the dangers to life from inhalation pneumonia; (*b*) it allows of easy deglutition; (*c*) there was a fair possibility as to recovery of voice without the use of any artificial apparatus; and (*d*) an increase in the patients who avoid disfigurement, and the avoidance of artificial apparatus. Tracheotomy should be done a few days previous to performing the third operation, and the patient must be of good vitality, free from any condition likely to complicate recovery, of suitable age, and in circumstances to assure proper after-care.—*American Medico-Surgical Bulletin*, May 23, 1896.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

Electric Depilation.—After treatment of this kind there are always a number of hairs that grow out again, and Dubreuilh states that these are new hairs, supplanting a hair that was dead at the time of treatment. To save the useless trouble of electrolyzing dead hairs, he first has the surface cut close a week or so beforehand, and then electrolyzes only those hairs which have evidently grown since they were cut, merely pulling out with the tweezers those that have not grown. A few weeks later he electrolyzes the young hairs that have grown in the places of the latter.—*Annales de Derm. et de Syph.*—*Journal American Medical Association*, June 13, 1896.

Treatment of Soft Chancre.—The treatment of soft chancre consists in the destruction of the ulcerated area by means of curetting and caustics, and as far as possible transforming the specific ulcer into a simple one. For the purpose of diminishing the virulence of the sore and of aiding cicatrization, Balzer recommends: First, that hot baths or hot moist applications shall be employed, if possible twice a day or more, and where only local applications are employed that a 1 per cent. solution of carbolic acid shall be used as a lotion. For purposes of cauterization every two days it is well to use the following prescription with a small tampon: Chloride of zinc; oxide of zinc, of each, 15 grains; distilled water, enough to make a paste. This is retained during several hours; and forms a small white eschar. In other cases carbolic acid dissolved in alcohol in the proportion of 10 per cent., or nitrate of silver in 20 per cent. solution, may be used. Among the innumerable preparations which have been named as more permanent dressings may be mentioned iodoform, aristol, salol, and champhorated naphthol. In the way of general treatment, Balzer insists upon the importance of preventing phagedenic spread of the disease, and believes that mercurials are of very distinct advantage.—*Journal des Practiciens—Therapeutic Gazette*, June, 1896.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

The Treatment of Sciatica.—DR. C. NEGRO treats sciatic neuralgia with almost unvarying success, by digital compression of the painful points along the course of the nerve. He has treated by this method 113 cases, with good results in 100. The method is briefly as follows: The patient assumes the prone posture in bed, with the lower limbs in a state of complete muscular relaxation. Compression is first made at the point of exit of the nerve, which is usually the most sensitive point. Pressure is made by bringing the right thumb in contact with the painful point, and over the right the left thumb is placed; the pressure must be energetic, and lasts about 20 seconds. Together with direct, lateral pressure is also made, the thumbs, however, during the execution of the movements remaining in a fixed position. The other painful points are successively treated. The *séances* of compression are repeated every other day. Ordinarily six *séances* suffice for a cure.—*Semaine Medicale*.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California. San Francisco.

Sodium Hyposulphite in the Local Treatment of Diphtheria.—DR. HENRY A. WICKERS says (*Lancet*, June 6, 1896): I have for some time been using a solution of sodium hyposulphite as a local application in diphtheria, and have been well satisfied with the results, three or four applications having generally been sufficient to clear away the false membrane. The solution is prepared for use by mixing equal parts of pure glycerine and a saturated solution of hyposulphite of sodium in water, and is applied with a brush to the exudation and inflamed fauces once or twice daily, or as often as may be deemed necessary. The glycerine, by its adhesiveness, keeps the solution longer in contact, and also by its well-known local action helps to relieve that engorgement of the mucous membrane, which seems especially favorable to the growth of exudation. It is probable that the hyposulphite has a continuing action as a germicide in the following manner: Chemical decomposition is first set up by contact with the acid secretions of the mouth and throat, sulphur and sulphurous acid in a nascent state being set free; the latter being gradually converted by oxidation into sulphuric acid would in the same manner decompose further portions of unchanged hyposulphite, and so on until the hyposulphite was exhausted. Of course, this local treatment will not interfere with the general treatment, which must be adapted to the necessities of each individual case.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. Hoisholt, M.D., Assistant Physician, State Asylum for Insane, Stockton, Cal.

Analgesia of the Ulnar Nerve in Cases of Insanity.—Dr. O. Snell has corroborated the statement made by Cramer, that the "funny bone" sensation, *i. e.*, the unpleasant feeling produced by pressure on the ulnar nerve in the sulcus ulnaris, is much more frequently absent in general paralytics than in other cases of insanity. He found the phenomenon absent in 14 out of 25 general paralytics, or in 56 per cent., while it was not found present in but 11 out of 75 cases of other forms of insanity. It was impossible to demonstrate a connection between the sensory disturbances of the surface of the skin innervated by the ulnar nerve and the other symptoms of general paralysis.—*Berliner klin, Wochenschr.—Centralbl. f. innere Med.*, March 7, 1896.

Gliosis in Epilepsy.—Dr. E. Blenler found, in the brains of 26 epileptics, a constant hypertrophy of the glia-fibers located between the pia and the most external, tangential nerve-fibers. The brains examined were of cases of marked epileptic dementia. Dr. Blenler afterward examined 54 brains of non-epileptics (51 insane and 3 mentally sound cases). In these cases no such gliosis was present. The picture was so characteristic that in all cases the sections of epileptic brains were recognized as such without the knowledge of the clinical diagnosis. In most of the cases of epilepsy the foramen magnum was found remarkably narrow. Whether the anatomical changes of the glia are consecutive to or accompanying the clinical picture of epilepsy, or perhaps the cause of it, cannot be determined. The writer, however, considers it probable that the gliosis sets in at least simultaneously with the beginning of the attacks, as the anatomical changes were not found greater after a longer than after a shorter duration of the disease.—*Münchener med. Wochenschr.—Centralbl. f. innere Med.*, March 14, 1896.

Heavy Brains.—Dr. J. Middlemass reports the weight of a brain at the *post-mortem* examination of a man, 70 years old, who, during childhood, had suffered from hydrocephalus. He had been an inmate of an insane asylum for 40 years, during which time there had been a gradual failing of all the mental faculties, beginning with conditions of excitement and hallucinations. The brain weighed 1957.5 gm. (61 + oz.). The patient became deaf and dumb early in life, and blind at the age of 35. The nervi optici and acoustici were found degenerated, but the cortical region of the gyrus angularis and the first temporo-sphenoidal convolution showed no atrophy. The cortex was microscopically normal; the white substance showed an even distribution throughout of fine, star-shaped cells, which are not found in the normal condition. Dr. G. C. Grant describes the brain of a man, 43 years of age, who had been subject to epilepsy for 7 years and who died in a demented condition, which weighed 2010 gm. (62.8 + oz.) exclusive of the fluid of the ventricles and of the thickened pia, which alone weighed 120 gm. (3.75 oz.); no macroscopical or microscopical anomalies were found, with the exception of an enlargement of the plexus choroideus of the lateral ventricles, the left one of which was partly ossified. Dr. J. A. Campbell reports that at 15 out of 1,146 *post mortem* examinations, made at the Garland Asylum for Insane, at Carlisle, the weight of the brain exceeded 1,800 gm., and in 3 instances it was over 1,900 gm. The heaviest brain observed in a case of epileptic dementia in a man, 24 years of age, weighed 2,145 gm. (67 + oz.). Among the 15 cases there was only one woman.—*Lancet.—Centralbl. f. innere Med.*

FORMULÆ.

By H. H. SANDERSON, Ph.B., M.D., Assistant Physician State Asylum for Insane, Stockton, Cal.

Dry Eczema, with Pruritus.—THELBIERGE suggests the following:

Menthol ....gr. xxx
Resorcin .... ..gr. xv
Sulphur. precipit.....ʒiiss
Zinci oxidi ....ʒiiss
Vaselin ....℥j—M.
Ft. Ungt.

To Remove Tattoo Marks.—BRANDT recommends the remaking of the tattoo marks with a solution of zinc chloride 30 parts in sterilized water, forty parts.—*Med. Record.*

Gastric Hyperacidity with Constipation.—DR. MAX EINHORN employs the following combination:

Magnesia.
Rhubarb.......āā 7.50 grammes
Bicarbonate sodium.
Carbonat. sodium.
Powd. sugar...āā 15.00 grammes
Oil peppermint *q. s.*

S.—Half to one teaspoonful in water two hours after each meal.—*Medical Weekly.*

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., San Francisco, Cal.

Mortality for May, 1896.—The deaths registered in 58 town districts of the State, during the month of May, in a population of 727,180, correspond to an annual rate of 16.20 a thousand, the total mortality having been 986. 54 deaths were due to zymotic diseases, giving an annual rate of .88 a thousand. Of these, 6 were due to diphtheria, 9 to cholera infantum, 12 to typhoid fever, 1 to diarrhea and dysentery, 11 to cerebro-spinal fever, 3 to whooping cough, 6 to croup, 5 to intermittent and remittent fevers, 0 to scarlet fever, 1 to measles, and 0 to small-pox. 282 deaths resulted from diseases of the respiratory organs, giving an annual rate of 4.56 a thousand. Of these, 160 were due to consumption, 81 to pneumonia, 33 to bronchitis, and 8 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.64 and 1.32, respectively. 92 deaths resulted from diseases of the heart, 4 from alcoholism, 0 from erysipelas, 42 from cancer, and 431 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 602,000, was 16.80. The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from Berkeley.

METEOROLOGY.

Summary for May, 1896—*Temperature.*—The normal temperature of the State for May is 64.1°; the average for May, 1896, was 61.2°, a departure from the normal of −2.9°. The highest monthly mean was 89.4°, at Volcano Springs; the lowest, 38°, at Bodie. The maximum temperature was 124° at Salton, on the 27th. The minimum, 12°, at Bodie, on the 10th. The absolute range for the State was 112°. The greatest monthly range was 73°, at Barstow; the least, 25°, at Crescent City.

Rainfall.—The normal precipitation for the State for May is 0.86 inches; the average for May, 1896, was 1.36 inches, a departure from the normal of +0.50 inches. The greatest monthly precipitation was 10.03 inches, at Bear Valley; the least, nothing, at numerous places throughout the State.

Wind.—The prevailing direction of wind was westerly.

Unusual Features.—The unusual meterological phenomena of the month was the continued low temperature during the first half of the month, causing the spring to be a week or ten days later than usual.—JAMES A. BARWICK, Director California Weather Service.

California—Tabular Statement for May, 1896.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean..........	Highest	Lowest..........	Mean Highest........	Mean Lowest..........	Mean Daily Range	No of Days Rain Fell......	Total Rainfall.........		No. of Clear Days......	No. of Fair Days..........	No. of Cloudy Days..........	Prevailing Direction.	
Auburn ....Cal.	60.0	92	44	------	------	------	----	2.42	------	----	----	----	S.W.	Southern Pacific Company.
Berkeley......... "	58 0	92	40	66	49	17	----	0.94	83	18	4	9	N.W.	Obs. University of California.
Colfax............ "	59.0	95	39	------	------	------	----	5.39	------	----	----	----	S.W.	Southern Pacific Company.
Coronado........ "	64.0	93	54	70	58	12	4	00.3	73	21	5	5	N.W.	Hotel del Coronado.
Eureka........... "	52.0	62	38	58	46	12	17	6 22	84	8	16	7	N.W.	Weather Bureau Dept. Agr.
Fresno........... "	64.0	102	41	78	50	28	9	0.02	52	21	8	2	W.	" " "
Keeler .... "	68.0	99	44	------	------	------	----	0.15	------	----	----	----	N.W.	" " "
Los Angeles.... "	63.0	103	44	74	52	22	4	0.30	67	14	16	1	W.	" " "
Monterey .... "	59.0	86	48	------	------	------	----	0.42	------	----	----	----	S.W.	Southern Pacific Company.
Napa............ "	59.0	98	36	72	46	26	6	1.10	73	16	9	6	S.W.	Station Napa Insane Asylum.
Oakland .... "	58.0	88	42	68	49	19	10	0.80	68	18	11	2	N.W.	Chabot Observatory.
Paso Robles.... "	58.0	94	36	72	45	27	3	0.77	52	15	9	7	N.W.	Agr. Experimental Station.
Red Bluff....... "	61.0	97	39	71	51	20	15	2.42	55	15	11	5	N.W.	Weather Bureau Dept. Agr.
Sacramento. ... "	60.0	96	39	70	50	20	8	0 92	62	15	8	8	S.W.	" " "
San Bernardino "	64.0	102	38	81	47	34	2	1.00	------	20	9	2	W.	A. K. Johnson, M. D
San Diego....... "	62 0	98	48	69	55	14	4	0.03	73	21	5	5	N.W.	Weather Bureau Dept. Agr.
San Francisco.. "	56.0	91	45	62	50	12	11	0.72	75	18	5	8	W.	" " "
Santa Barbara.. "	61.0	98	42	72	50	22	2	0.08	62	22	8	1	W.	Hugh D. Vail.
Santa Cruz...... "	57.0	95	34	70	44	26	4	1.66	------	21	7	3	N.W.	W. R. Springer.
Yuma..........A. T.	77.0	112	49	92	62	30	1	T	33	26	5	0	W.	Weather Bureau Dept. Agr.

NOTE—Mean humidity at Paso Robles is of the 2 P. M. observation.

Blank (----) indicates data missing.

Occidental Medical Times.

Communications are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

Sacramento: July, 1896.

THE PAN-AMERICAN MEDICAL CONGRESS.

In our issue of June we published the preliminary announcement of the second Pan-American Medical Congress, to be held in the City of Mexico, in November next. We are now in receipt of the regulations of the Congress, which are as follows:

General Sessions.—There will be one opening session, one closing, and one intermediate session, of a purely scientific character. The opening session, which will be of a solemn character and presided over by the Supreme authority of the Nation, besides being attended by the members of the Congress, will also be attended by the members of scientific societies, and other distinguished persons who may be invited. The session will be opened with the report of the General Secretary. This will be followed by a speech of welcome, pronounced by the President of the Congress. Two members will then speak on scientific subjects, and they will be followed by a speech from the President of the Republic. It is strongly recommended that the scientific speeches should be of short duration. The intervals between the speeches will be filled up with musical performances. At the closing session, the General Secretary will announce the place designated by the Congress for holding the third meeting. The Treasurer will present his accounts to the Congress, showing the disbursements made of the funds entrusted to his care. A scientific speech will be delivered and a short speech by one Representative of each one of the nations attending the Congress. In the intermediate session, four speeches will be delivered on general matters, by persons who are highly distinguished in medical science, and who, having been in due time invited to do so, have accepted the commission; one of these speeches being pronounced by a Mexican physician, who shall be invited to do so by the Committee of Management. No discussions will be held in the General Sessions.

Sessions of the Sections.—These sessions will be held from 9 to 12 A. M., and from 3 to 5 P. M., in the places that may be designated by the Organizing Committee. They shall be presided over by the President of each section, alternating with the Vice-Presidents of each one of the nations that are represented in the respective Sections. The person who may be appointed by the Committee of Organization, will be the *ex-officio* Secretary of each Section, and he will fill his post alternately with the Secretaries of the nations who may be represented in the Sections; but should the latter not be present, their places will be supplied by the President in office. The President will direct the discussion in accordance with the order of the day, and will decide all questions that may arise, and that may not be provided for in these regulations. The *ex-officio* Secretary will make out the minutes, and for that purpose, besides his own notes, will collect those of the Secretaries who may have acted in the Section. He will also collect from the persons who may have spoken, the written extracts already referred to. All questions relating to the debates which are not provided for in these regulations, will be decided in accordance with general parliamentary practice. The voting will be by name or by putting the question.

Papers, Extracts thereof, and Discussions in the Sessions of the Sections.—All papers will be presented in writing. Each author will forward to the Secretary of the Organizing Committee, in the City of Mexico, and before the first day of August of the present year, an extract not exceeding 300 words, of the paper to be presented by him. These extracts will be printed in English, French, and Spanish, and will be distributed to the members of the Congress before the session in which they are to be read. No paper will be announced which is not accompanied by this extract; but the authors who comply with these conditions, will have a right to have their work published intact in the transactions of the Congress. The reading of the papers in the sessions must not last more than 20 minutes; when the papers are so long that they cannot be read within that time, the authors will give extracts from them, either in writing or by speech; but they will be published intact in the transactions of the Congress, and in the language in which they have been written. These extracts will be delivered at the same time as the papers, to the Secretary of the Section to which they pertain. The members of the Congress who may take part in the discussions in any section, will present their speeches in writing at the termination of the sessions, to the respective Secretaries of such Sections, and they will also be published in the transactions. The papers which have been announced for reading in the order of the day in each Section, will serve as subjects for discussion. In such discussions, no speaker will be allowed to speak more than once and for five minutes; but the author of the paper under discussion will be allowed to reply, if he considers it necessary, in one sole speech, which will not go beyond ten minutes.

Auxiliary Committees in the Mexican Republic.—These committees will be appointed by the Committee of Organization, and will be composed of one member for each Local Medical Society, or in their absence, of one physician for every center of population. They will coöperate with the Committee of Organization in promoting the success of the Congress. Said committees will be appointed during the first months of the present year.

Executive Committee.—In order to form this Committee, the Organizing Committee will appoint seven members, including the President, Secretary, Treasurer, and the Mexican representative in the International Executive Committee, and such members will attend to everything relating to the business of the Congress, in accordance with the regulations that they may adopt for that purpose.

Prof. Don Francisco Bastillos, Calle de Tacuba No. 7, Cuidad de Mexico, D. F. Republaca Mexicana, has been elected Treasurer of the Congress. The members residing in the United States and Canada, and others who contemplate attending, should forward to him the registration fee of $5, in gold, and notify **Dr. C. A. L. Reed**, of Cincinnati, Ohio. The proximity of Mexico to the Pacific coast States, and the facilities for reaching the Capital, together with the time of year at which the Congress will be held, should insure a large attendance from this coast.

COMMENCEMENTS—COLLEGE OF DENTISTRY, UNIVERSITY OF CALIFORNIA,

The graduating exercises of the College of Dentistry, University of California, were held in Odd Fellows' Hall, Tuesday evening, June 18th. After prayer by the **Rev. W. W. Bolton**, an address on behalf of the Faculty was delivered by **Prof. John M. Williamson**. The degree of Doctor of Dental Surgery was then conferred by the President of the University, **Martin Kellogg**. The audience was large and enthusiastic; in fact, so great was the attendance, that the accommodations were altogether overtaxed. During the exercises a musical programme was rendered by ROSNER'S orchestra.

The following are the names of the graduates: William Henry Abbay, Henry Abrahm, George Abrams, Marilda Jane Ayers, Frederick Guernsey Baird, Mary Louise Baird, Bertram Carl Boeseke, Franklin Calvin Bonnel, Charles Harold Bowman, Albert Caferata, Paul Tulane Carrington, Harry George Chappel, William Nathan Clark, Frank Herman Cranz, Jacob Cohn, Stephen Joseph Cunningham, William Edward Davis, James Morton Forrest, Jr., Arthur A. Fowler, H. Edward Gedge, Amy Maxted Gilbert, Charles Daniels Gilman, Lawrence Greenbaum, Richard George Cornelius Harms, Charles Edwin Hart, Arthur Philip Harth, George Morgan Harris, Alexander Hamilton Hawley, George Henry Haynes, Samuel William Hilliard, Guy Brown Husted, Konrad Magnus Lundborg, Stephen Cholmeley Maynard, Naoma Gae MacDonald, Robert B. McNutt, Thomas Snelling Marden, Fred Gustave Pless, Charles Bruce Porter, Jr., Joseph Ignatius Richards, Leon Joseph Roth, Anna Martin Sawyer, John Herbert Seager, B.A.; Frank Joseph Smith, George Edward Stallman, Benjamin Mitchell Stich, Montgomery Thomas, Oscar Torriner, Clifford Todd, William Henry Ware, Lauren David Webster, Clyde Allan Weldon, Edward William Westphal.

The total number of students in attendance during the past session was 188, the number of matriculates being 84.

NOTES.

University of California, Medical Department.

Owing to the necessary data having been furnished too late for publication, the following figures were omitted from our account of the graduating exercises of the Medical Department of the University. Total number of students in attendance during the past session, 106. Number of Matriculates, 32.

Mississippi Valley Medical Association.

The twenty-second annual meeting of the Mississippi Valley Medical Association will be held at St. Paul, Minn., October 20th to 23d, 1896. The meeting promises to be the largest in the history of the Association. The President, Dr. H. O. Walker, of Detroit, and Dr. H. W. Loeb, the Secretary, 3559 Olive street, St. Louis, will be glad to receive the titles of papers. It is expected that reduced transportation rates will be obtained. Dr. X. C. Scott, 457 Prospect street, Cleveland, Ohio, is Chairman of the Committee on Transportation.

Milk Inspection and Life Insurance.

Dr. Howard Carter, Milk Inspector of the City of St. Louis, has issued a circular to the Medical Directors of the various life insurance companies, pointing out the great danger to life that exists from the transmission of tuberculosis from cattle through the medium of infected milk. There is no doubt that this is one of the sources through which mankind is attacked, particularly during the earlier years when the food consists largely of milk, and therefore efficient legislation is needed. If this move will in any way assist in obtaining the necessary legislation, it is an effort in the right direction.

International Congress of Dermatology

The third International Congress of Dermatology will meet in London, August 4 to 8, 1896. There will be a museum of drawings, casts, models, naked eye preparations, microscopic specimens, works and atlases pertaining to diseases of the skin. There will also be an exhibition of clinical cases and demonstrations of the same. There will be an exhibition of cultures and microscopical preparations of organisms connected with the skin and its diseases. It is advised that foreigners should arrive in London not later than Sunday, August 2d, as Monday the 3d is a public holiday. Information in regard to hotels will be furnished on application to George Pernet, Esq., 77 Upper Gloucester Place, London, N. W. Dr. George Thomas Jackson is Foreign Secretary for the United States.

Harvard University Begins Suit against a Chicago Institution.

The *Boston Medical and Surgical Journal* says: The authorities of Harvard University are protesting against the use of the name Harvard Medical College by a Chicago institution. A bill for an injunction, sworn to by President Eliot, of the University, was filed in the Federal Court of that city lately. The Chicago institution is charged with infringing upon the title and the rights of the great university. The local institution is located at Washington Boulevard and Elizabeth street. It was organized in 1893 and is conducted as a coëducational medical college, having night sessions only. The President is Dr. A. H. Tagert, and its faculty of twenty professors are all local physicians and surgeons. The bill filed on behalf of Harvard College, Massachusetts, recited the history of the university since its inception in 1636, the name of Harvard being adopted in 1638. The bill asserts that it "has acquired a peculiar and exclusive right and title in and to the name Harvard, when used or proposed to be used as the name of a university, college, or professional school, and it ought not in equity and good conscience to be assumed by any other institution of learning, and if ever so assumed by any other institution, must of necessity be so assumed and used in fraud of your orator's rights and for the purpose of assuming some of the credit and reputation properly belonging solely to your orator, and of injuring and endangering your orator pecuniarily and otherwise, and imposing upon and defrauding the public everywhere." The case will probably come into Court next autumn.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, May 19, 1896.

The President, F. B. SUTLIFF, M.D., in the Chair.

Non-Union of Tibia after Fracture.—DR. G. C. SIMMONS reported a case of non-union following fracture, the patient, a boy 11 years of age, being exhibited. When 15 months old some deformity of the right tibia appeared. A slight splint was applied, but union did not take place, and the deformity remained uncorrected. Two years later DR. G G. TYRRELL, with other members of the Society, operated upon the case. The ends of the tibia were removed and wired. The wound healed, but there was non-union of the bony tissue The boy's limb is now in bad condition, being incapable of supporting his weight. The union is fibrous and the fragments overlap.

DR. T. W. HUNTINGTON: It is probable that bony union might be secured after an operation. However, unless the parents were strongly opposed to it, I would advise amputation, although I believe this should be a last resort, as the wearing of an artificial limb is not without its terrors.

DR. W. A. BRIGGS: It seems to me that amputation would be proper in this case. The chances of any other procedure are hardly worth taking. Even with a successful resection the result would be useless, as the foot would be in the middle of the leg, and as the child grew up he would have to use a stilt 6 or 8 inches in length, which would be less convenient than an artificial limb.

DR. G. L. SIMMONS: I saw the case several times after the operation. The inferior fragment rose above the line of union and of course there was no result. My idea, if anything be done, is first a preliminary tenotomy and then to rewire the fragments, though this should be done with an unfavorable prognosis on account of the general appearance of the boy. He was frail when the first operation was done and is so now. He is not a good specimen of bony development for a boy 11 years of age. Under the circumstances, amputation would hold out the best inducement for a favorable result.

Wrist Drop due to Compression of Musculo-Spiral Nerve—Operation—Recovery.—DR. T. W. HUNTINGTON reported the following case: A. LaP——, aged 37, painter, sustained an oblique fracture of the humerus September 2, 1895. Although the obliquity of the fracture line was very pronounced, and much difficulty was encountered in maintaining apposition of fragments, a most excellent result was obtained and there was good union at the end of 4 weeks. At no time during this period was the relation between the fracture line and the musculo-spiral groove discussed. The patient was discharged at the end of a month. Immediately thereafter he noticed that the hand and wrist on the affected side were enfeebled, but paid no special attention to this fact for some time. On November 1, 1895, two months after injury, he again applied for treatment, when it was discovered that there was complete wrist drop. The cause of the condition being attributed to compression of the musculo-spiral nerve by the callus at the seat of fracture, I advised an operation to disengage the nerve trunk. This was done November 5, 1895. On exposing the humerus it was found that the fracture line followed the musculo-spiral groove for a considerable distance. The nerve was uncovered at points of entrance to and emergence from the bracelet of callus and was set free by carefully chiselling a trench through the calcified mass. The nerve trunk was then stitched to the overlying muscle. The wound healed *per primam*, and the use of the faradic current was begun at the end of 10 days. Five days later, by the exhibition of slight violence, the humerus was refractured. There was reunion of this fracture at the end of 3 weeks and electricity was again applied. Reëstablishment of the function of the musculo spiral nerve was tardy, as it is in all cases of this sort, but at the end of 8 months the limb was in excellent condition and the patient had resumed work.

Puerperal Eclampsia.—DR. J. H. PARKINSON reported a fatal case of puerperal eclampsia in a primapara 19 years of age. The patient expected to be confined early in September. About August 10th the urine was carefully examined, and a note made that it was normal, no albumin being present nor anything to excite suspicion. On the 16th of August the patient was seen for the first time. She was a strong, healthy, well-developed girl, but noticeably pale. Reference was made to this fact, but the mother said it was her normal condition. As she did not live in this city, having come here to be confined, and being unmarried, this paleness might be explained by constant confinement in the house. There was no puffing of the feet or ankles. My impression is that the urine was again examined at a later date, but I have no record of same. On the morning of the 29th I was sent for early, the messenger stating that the patient had had a severe "fit." I found her in a comatose condition, with some muscular twitching. She had complained of indigestion the night before, having eaten a very hearty supper. About half-past six her mother, who was in the next room, heard her cry out, as if for assistance, and, upon going in, found her struggling violently and unconscious. During that day the patient had a number of convulsions—sixteen in all—and, as by the afternoon there seemed to be no signs of cessation, with the assistance of Dr. F. B. Sutliff, I proceeded to deliver her. This was accomplished instrumentally, it being necessary to dilate the os manually. The convulsions continued without any cessation. The urine removed by the catheter, prior to delivery, and again on the 30th, contained large amounts of albumin, apparently solidifying on heating. The specific gravity of the specimen taken on the 21st was 1025. The convulsions ceased on the second day, but the patient, who never regained consciousness, died that evening. Dr. T. W. Huntington also saw the case, but not until patient was moribund. The treatment consisted of morphine, hypodermically, with chloral and bromide by the rectum. An attempt was made to fill the bowel with warm water, but while large quantities were injected and carried well into the colon with the long tube, they would only be retained for a short time. Water was subsequently introduced in considerable quantities into the stomach by the aid of a soft tube and funnel, and appeared to be readily absorbed. The patient's skin acted well throughout. Elaterium sufficient to produce free catharsis was also given. Digitalis was given by the mouth and hypodermically. The pulse, at no time, was hard or bounding, but, while full, was quite soft. In this case the point of interest is the absence of albumin in the urine so short a time prior to the occurrence of the convulsions. The general good health of the patient—bowels moving regularly, stomach in perfect order, and no headache, or premonitory symptoms of any kind. I have repeatedly seen albumin in the urine in considerable quantities in cases that went on to delivery without convulsions before or subsequently.

DR. F. B. SUTLIFF: This case was one that Dr. Parkinson had called my attention to as likely to occur when he was out of town, and which I had agreed to take charge of. The convulsions were somewhat unusual, being very profound in character and with no intermission between the spasms. The woman, was large and muscular, struggled violently during the seizures. I saw the case several times in consultation, but it seemed impossible to induce the kidneys to resume their action.

DR. F. GUNDRUM: We infrequently come across cases that nothing will cure, and this, no doubt, was a desperate case. I think the speaker deprived himself of two or three means that might have been employed in controlling the convulsions. Chloroform was not used in this case. Convulsions can be entirely controlled by chloroform, and it will do much better than the bromides and chloral. I have kept patients under chloroform for hours, controlling the convulsions entirely. The next remedy was veratrum viride. Another remedy would have been the abstraction of blood and the introduction of the normal saline solution, which would have diminished the poison in the blood mass and introduced a non-septic material in place of it.

Dr. G. C. Simmons: I was struck by Dr. Parkinson's remark in regard to finding considerable albumin in the urine previous to confinement, and yet having no bad symptoms. I have examined cases carefully twice a week, and have found none until two weeks before labor. I have then put the patients on skim milk, and they progressed very favorably.

Dr. W. A. Briggs: It seems to me that sometimes in discussing these questions we note the symptoms and forget the pathology of the case. This is particularly true of eclampsia. It seems to me we should always remember we have in these cases nephritis. These cases should be treated as nephritis, with eclampsia as a symptom, and it seems to me we shall then clearly see what is the action of the treatment. In the first place, treat the menacing symptom convulsions, and that can best be done by chloral—chloral by the rectum and chloroform inhalation. I think chloral is equally as good as chloroform if you get it into the system, and it is less dangerous. The first important point is, of course, to restore the action of the kidneys. It has been my habit for several years to examine the urine of pregnant women under my care, weekly for six months, and once or twice before that during the earlier months. Since I have adopted this plan I have not had a case of puerperal eclampsia. I have had a large number of cases of albuminuria, but in every case I have been able to control and prevent eclampsia. This may be, in part, accidental, as we have a series of happy cases and a series of unfortunate ones, but as my experience coincides exactly with those who claim puerperal eclampsia is a preventable disease, except in case of chronic nephritis, the inference is a fair one. It is thought that puerperal kidney is always preventable. I not only insist upon a weekly examination of the urine, but insist as far as possible upon their taking large quantities of liquid during pregnancy. The most suitable liquid is milk, and if not kindly taken to by patients it may be substituted by water in larger quantities. I believe that, from the best observations of others, these cases are largely preventable. I have had good results from the hot water bag over the kidney in these cases. I heat it to a temperature as high as can be borne. Its action promotes circulation, eliminating the poison, and it is very beneficial. In the second place, I should attempt to dilute the blood by introducing liquid into the system, and should try to eliminate the poison as rapidly as possible, which can be done by alcohol baths, and the action of pilocarpine. If we can tide the patient over for 24 or 48 hours the case will solve itself. I can see no special criticism to make on the treatment by the speaker.

Dr. L. A. Harcourt: The case is certainly an interesting one and it seems to me one that no one is competent to criticize. The treatment, as far as it went, was admirable. In anemic patients chloroform is the best. As to prophylactic treatment, I will say chloral is excellent in these cases, used by the mouth or rectum. This reminds me of a case which occurred in my practice. I was called to see a woman and on arriving found her unconscious. She appeared to have had chills and was 7 months gone in pregnancy. Something about the movements of the woman seemed to indicate that she was in labor. While making an examination she had a spasm. There was not very much time for action. I applied bottles of hot water and hot irons to the extremities. This was continued until about 11 o'clock, controlling the convulsions by chloroform every 5 or 6 minutes. About 12 o'clock we made an examination, found the os dilated and delivered her immediately.

Dr. T. W. Huntington: The normal salt solution injected under the skin, would seem to me to be a good thing in these cases It has certainly served an excellent purpose in my hands in a number of cases. I have had patients practically dead from shock and loss of blood. It does well instead of hot bottles.

Dr. H. L. Nichols: I think a grand remedy was neglected in this case, that of copious blood letting. I have a great respect for Dr. Huntington's opinion in surgical matters, but I cannot agree with him in this instance. I have seen it used with good effect in these cases and believe it to be the best of all remedies. I do not think any patient ought to die of eclampsia without having blood letting resorted to.

Dr. Parkinson: Chloroform was given during the greater part of the first day, during delivery and subsequently. I have seen it used ineffectuallv, while in other cases it has seemed to control the convulsions. As regards blood-letting, it is intelligible, that this can be of service in some cases. In the present case there was nothing to warrant it. The patient was not full-blooded in any sense. The injection of a saline solution into the cellular tissue was not considered. I have seen water introduced into the bowel in large quantities and absorbed very readily. and assuming that this case depended on inactivity of the kidneys, this method of flushing out, seems to me, rational treatment. I have tried, as Dr. Briggs mentions, to examine the urine at intervals during pregnancy, but find this very difficult to carry out, as even with the most persistent efforts, patients will frequently fail to bring it in.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, May 12, 1896.

The President, **Wm. Fitch Cheney**, M.D., in the Chair.

New Members.—**Adolf Nusbaum**, M.D., and **Chas. V. Cross**, M.D., were duly elected members of the Society.

Dr. W. S. Thorne read a paper entitled "The Position of the Red Corpuscle in Forensic Medicine." The author stated that, through the courtesy of the San Francisco Microscopical Society, Dr. Eisen, of the Academy of Sciences, and Messrs. Riedy, Grimwood, and Freund, he was enabled to show [specimens exhibited] many slides of the red corpuscles of mammalia, reptiles, etc.

Dr. Eisen: I wish to speak of a specimen of bactracian blood that is here exhibited, and that has very peculiar characters. An investigator in Philadelphia has said that there was no membrane surrounding the red cells. Now, in bactracians there is to an absolute certainty. This can be demonstrated by putting some of the red cells in the salt solution on a warm stage, when, in a short time only the thin membrane remains, which stains distinctly. In the blood here shown, that of batrachiseps attenuatis, the size of the red cell varies greatly; some are from one-half to seven times the size of human red blood cells; the shapes vary, too, being oblong, round, bi-concave, etc. As to nuclei, we may now find only one or two to a slide, while later on in the fall 10 per cent. of the cells will be nucleated, thus again showing its peculiarities.

Dr. D. W. Montgomery: I have had some little experience in measuring and investigating the red corpuscle. When it comes down to a single case to state whether or not a certain specimen of blood is that of a human being, or of a domestic animal, it is a very ticklish proposition. In a somewhat celebrated case, not long since, an effort was made to distingush between the blood of a pig and of a human being. The specimen, several months old, was a stain on a pair of overalls. It was an exceedingly difficult matter to get the red coloration or corpuscles at all. Of course the gross macroscopical appearance was that of a blood stain; but to differentiate by the microscope is a very difficult proposition, and, in fact, one that was beyond us. I think it would be hazardous in any case for the expert to say, microscopically, that a given specimen was or was not human blood. At the time we obtained a sample of hog's blood, and I must say the difference could not be made out to such a certainty as would justify the hanging of a man. We must take into consideration the slight difference in size between the human and the hog's corpuscles. Neither may be in "roulette" or overlapped. We do not deal with square corners, but with soft substances, and when once dried and filled again who can say they are as full or of a similar size as before. In measuring we have also to take into account the personal equation. One investigator may obtain a consecutive number of measurements that are very similar, while another, with the same lot and under similar conditions, may differ. The size would certainly differ when measured from the outer or inner edge. Take a number of men at a clinical consultation and they will differ. Men who are used to the microscope, its errors, etc., will get before a jury who have not a medical or scientific man amongst them and talk to them practically in an unknown tongue. There are very few of us, unaccustomed to microscopical work, who would understand evidence of this character, and certainly not the average juror. The jurors takes the figures as being absolutely fixed; and I say it is drawing it too fine to make such differential diagnoses. Suppose even an experienced microscopist should find an isolated corpuscle, it would be next to impossible for him to state positively that it was from a human being. There are spores of some plants that very much resemble human blood corpuscles, and that have been mistaken for them by very good men.

Mr. Freund: I believe I know the case mentioned by Dr. Montgomery. I was approached at that time in relation to it, but said it would be impossible to hang a man upon such evidence, in fact, that it would be radically wrong to do so.

Dr. Gray: Some three years ago I was appealed to by the prosecuting attorney to prove the character of blood stains on a butcher's knife. The person stated that the stain was the blood of a hog, he having recently killed one. It happened that, at the trial, my testimony was not needed. I made diagrams of the blood of man and of the hog, and if I would submit them to you here this evening you would say that they were different. I am surprised that no reference has been made to Dr. White, whose experience in blood research is very great. As to measurements, Dr. White measures from the outer extremity of one to the outer extremity of the other. If all measurements were thus taken, or by other definite rule, we would not have so many differences. The personal equation is, of course, a constant quantity; so, too, is the stage and the micromillimeter. As to the jury, Dr. Montgomery is correct, they should not only be acquainted with the facts, but should be made to share our responsibility. The best method to pursue in blood examination is as follows: Take a good stage micromillimeter, a power of one-twelfth to one fifteenth, magnifying 1,000 to 1,500 times, using the camera lucida, drawing charts by it, and make drawings of 50 or 100 corpuscles. Then the question of measuring them would not come in; they are drawn and can be seen by the eye. These, then, are shown to the jury, and they then would decide. The personal equation would still, however, be in the way. In another case where the culprit said he had shot a jack rabbit, and had got some of its blood on his clothes. It so happened that the blood corpuscles in the jack-rabbit had never been measured, and on examination they were found to be much smaller. Just before the microscopist was called to the stand to testify the accused found his plea was no good, withdrew it and pleaded guilty.

Dr. G. W. Davis: Dr. Thorne has demonstrated the fact that he has given this subject great care and attention. There can be no doubt that the consensus of opinion of all men investigating the subject, from a medico-legal point of view, is against conviction on such an opinion. It is not possible to absolutely differentiate between the blood of man and of some other animal, and we must all agree with Dr. Thorne that it is impossible to convict on the evidence of a microscopical examination. Chemical examination is not a good method, either, to distinguish the difference, though it is said that the hematin or hydrochloride of hematin existing in human blood is thrown down by a certain chemical process. Such an examination, however, can only be made with a quantity of blood.

Dr. C. G. Kuhlman: I have been drawn into two murder cases during my professional career, and have sat and listened to "medical expert testimony" in the most celebrated murder case in the history of the world, that of Dr. Cronin, killed a few years ago in Chicago. There medical men of international reputation, such as Haines, Bellfield, Tollman, and others recognized as authorities on bacteriology, microscopy, and chemistry, gave testimony regarding the position held by the red blood corpuscles in forensic medicine. I feel, therefore, that I am competent to give an emphatic opinion upon the subject. The author of this paper confirms my position in a paper written by me a few months ago and published as the leading article in the April number of the *St. Louis Medical and Surgical Journal*, under the title, "The Microscope as a Guide in Medicine;" it being in opposition to the microscope. While it is possible to differentiate, microscopically, between the red corpuscles of mammalia and those of birds, reptiles, amphibia, and fishes, owing to the fact that the latter are possessed of a reticulated nucleus, still it is impossible to differentiate between those of the different kinds of mammalia, as they may vary in size within any one kind from the $\frac{1}{2500}$ to $\frac{1}{4600}$ of an inch in diameter. This was fully brought out and conceded by the experts in the Cronin case. As the author made no mention of blood crystals, and as they finally become the pivot upon which the expert testimony in the Cronin case revolved, I would take up that part of the subject and complete the paper. Normally, the geometrical outlines of "blood crystals" in different kinds of mammalia may vary from trihedral in the guinea pig, pentagonal in the squirrel, octohedral in the rat and mouse, and tetrahedal or quadralateral prisms in man and others. These crystals may, however, change from normal forms into a variety of forms, polymorphic forms as it were, under the influence of various substances causing oxidation and deoxidation, giving rise in turn to hemine, hematin, and hematoidin, and they may also change form under external conditions of heat, light, moisture, magnetism, and electricity. From the foregoing we are justified in arriving at the following conclusions: (1) That the red corpuscle is a microscopic unit and holds no position in forensic medicine. (2) That blood crystals hold no position in forensic medicine. (3) That owing to natural and accidental defects in microscopes and microscopists, the microscope holds no position in forensic medicine.

Dr. Thorne: The best literature on this subject, that by Sternberg, White, and Warmley, give no credence to the crystaline forms, as the size, shape, etc., are exceedingly uncertain.

Dr. Charlotte B. Brown read a paper and exhibited a specimen from an unusual case of fibroid of the uterus.

Dr. Philip King Brown: I remember a case of Dr. Warren's, of Boston, where the abdominal contents were exposed, there being no covering for the abdomen at birth. The doctor closed the cavity and the child survived, but I do not know whether it ultimately grew up.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, May 16, 1896.

The President, J. M. Williamson, M.D., in the Chair.

Dr. J. F. McCone read the notes of, and exhibited, an interesting case which was under the care of **Dr. Caglieri**. The diagnosis was obscure, and it was to diagnose the liver trouble that the case was brought before the Academy. Other physicians who had seen the case, pronounced it a case of leucocythemia. Recently the liver had become nodulated and lately the case has developed rapidly, so that a fatal termination will soon be reached.

Dr. Dudley Tait: I cannot share with the two gentlemen the idea that this is a malignant disease of the liver. There seems to my mind nothing that would suggest a malignant growth. The girl is young and the growth rapid. The condition of the patient now is typically a septic condition My opinion is that we have either an hepatic abscess or a suppurating hydatid cyst. Hydatids, we know, are frequent in the Italians in Italy, but this could be readily made clear by the use of the hypodermic needle.

Dr. McCone said: Dr. Tait's points are well taken, and I think it would be wrong to let the patient go on without surgical interference, as exploration is indicated.

Dr. H. Kreutzmann: I have not seen enough of the case for diagnosis, but Dr. Tait's words are good. I believe that something should be done surgically; nothing should be left undone, and an operation would clear matters up.

Dr. Caglieri: My objections to Dr. Tait's remarks are: (1) The patient, although an Italian, has been in this country for some years. (2) The liver's upper border is not regular. Some mornings we find the abdomen quite flaccid and relaxed, and I can then easily palpate the liver and I find it distinctly hard and nodular. The spleen is enlarged and not nodulated. The patient has not noticed, until lately, the increase in size of the abdomen, although her friends say that she has been much swollen for a long time, and when she consulted me, at first glance, she appeared to be pregnant. She has no chills or sweats, and the fever in the afternoon is not constant.

Dr. D. W. Montgomery read a paper entitled "An Obstinate Case of Chancre of the Lower Lip."

Dr. H. F. A. Kugeler: In connection with the question of diagnosis, I do not think that the giving of a few proto-iodide pills and an inunction or so of blue ointment are sufficient as a test. In the old world, they rub in the ointment until the teeth fairly chatter; here they seem to be afraid. I remember a case at the County Hospital, where a diagnosis of mumps had been made. I made sections, and in one I found an epithelial pearl; the best one that I have ever seen. Arnold, of Heidelberg, says that we are liable to get pearls in any case where there is a rapid proliferation of cells.

Dr. G. Gross: I have not heard Dr. Montgomery speak of any glandular swellings in the groin or neck. In my experience, such enlargements are an early symptom, and another symptom is vertigo. Some patients do not remember suffering with it, but it is one of the very first symptoms. He did not speak of joint pains, which are also early symptoms. As to the treatment, I must say that it was not strong enough. At the last meeting of the Academy, Dr. Tait and myself spoke of the massive and intra venous injections of mercury. I, myself, have had considerable experience with the massive injection treatment and have had uniformly good results, especially in cerebral syphilis. I will not say that the patient be salivated, as Dr. Kugeler says, but rather that we examine the urine, where we quickly find mercury during the massive injection treatment. In the intra muscular injection of calomel, we avoid salivation. If there is an affection of the kidneys or mouth we should not give such treatments. One reason why the calomel injection is better is, that it holds a higher percentage of mercury. It contains 80 per cent., I believe, while the proto-iodide contains only 45 per cent. The exact figures I cannot now recall. The general treatment is more reliable than the local. I believe we should insist, as a test, on the massive calomel intra-muscular injections or the intravenous injections of corrosive sublimate.

Dr. Dudley Tait: The rationale of using mercury and ointments on chancres I cannot understand. No local treatment will hasten their development or absorption, as they go through a certain evolution. The long duration of Dr. Montgomery's case was not so very unusual. They frequently last 3 months, and I think it is a question of virulent soil, rather than virulent virus.

Dr. Montgomery: As to the duration of chancres, they generally last 4 or 5 weeks, and a chancre of the lip goes through much the same course, except that it may be somewhat longer from the movement of the lips. Its duration also depends upon the amount of infiltration. This one reported lasted 144 days, nearly half a year. As to the treatment of chancres with emplastrum or unguentum hydrargyrum, I have found it quite satisfactory after years of trial. It is good for either hard or soft chancres. We cannot apply calomel powder very well, as it crusts over, whereas the emplastrum or unguentum hydrargyrum softens the crust and it also relieves pain, and the general condition of the sore is improved The proto-iodide, I think, is almost universally used here in the United States and in France, while the inunctions are mostly used in Germany. I believe but few who use the inunctions understand, or make the patient understand, how to use them, as much of it is left outside instead of being rubbed well into the skin. The proto-iodide is a good conservative treatment. The hydrargyrum cum creta is also good. As to the injection methods, I have never come around to them as yet. I once tried the bichloride intra-venous injection, and I must say that it is not an easy procedure to get into the veins with the needle. When we inject the bichloride into the vein we get a thrombus, and I cannot see what advantage there is from the absorption of the albuminate from the thrombus. It is absurd to think that the white corpuscles go hand in hand. We cannot regulate the absorption, therefore we cannot regulate the dose as by the stomach and intestines. We are dealing with an uncertain quantity, and, in addition, there is always danger in forming a thrombus in a vein. As to the massive injections: What do we find at the autopsies, and they have been made. We find that the mercury is not all absorbed, and it shows that here, too, we do not know the dosage; that mercury may remain a long time before it is given out, and even then it may be only given out by fits and starts. Now, as to the symptoms in this case. Dr. Gross asks of the other symptoms as lymphatic gland enlargement. Case after case of secondary syphilis, seen both in dispensary and private practice, shows no enlarged glands except those in the immediate neighborhood of the sore. In this case there was great enlargement of the sub-maxillary glands. This case afterward had a papular syphilide, and the only doubt that could be was that the sore on the lip might have been a gumma and not a primary sore. The whole trend of the symptoms and course showed it to be a primary sore. As to the other symptoms, as pains in the joints, any old woman in San Francisco will have pains in her joints. The general health, in other respects, of this case was good, and there was no kidney disease. I should like to ask of the members present here to-night if they think that the intra-venous injections of sublimate, with a thrombus formation, can be any better than the regular ingestion of the remedy.

Dr. Tait: I have had poor success with inunctions in gummata, where I have given the intra-venous injections twice in one week and they worked splendidly. Theoretically, I have nothing to bring forward, though I have used it several times and find the operation difficult. The first time that I used it, a very diffuse inflammation was set up, and in the second case I had great difficulty in penetrating the vein.

Dr. G. Gross: One great reason why the intra-venous injections should be used is, that they are very rapidly absorbed. This can be proved by finding mercury in the urine, say in 10 minutes after injection, and besides, there are the chemical effects. If we are sure it is absorbed, then we can regulate the doses. The *technique* of the operation renders it difficult for some. By experience it becomes easy. The fact of mercury remaining in the tissues after a massive calomel injection is no argument against its use. For the longer the mercury would remain in the system the better. Another and an immense advantage is the heroic effects produced by it. We can control the dose, though we cannot control the absorption We can take into consideration the weight of the subject, and if we follow the proper *technique*, we are all right. We do have a thrombus, and it is a fact we cannot control the absorption. At the next meeting I will make a report of cases, and some from France, where the method has made great strides. We save the stomach and there is no salivation from the "gray oil," and as I said, the chemical effects, we cannot gainsay, they are most striking.

Dr. Montgomery: We save the stomach and do not salivate with the proto-iodide. I know of the bichloride injections being carried on for years by Lewin, of Berlin, who, no doubt, is one of the best living syphilographers. It is satisfactory to him and no doubt is efficacious, but I have seen many treatments for syphilis, as well as other diseases, spring up like mushrooms and go down. It is a painful procedure, and can give rise to abscess by serious inflammation. As to blue ointment, I shall continue to apply it to the primary sore, as I find it excellent, and as to the rest of the treatment, in my case, I cannot see that it could be bettered.

Dr. Gross: Suppose you had a case of cerebral syphilis, would you treat it with the proto iodide?

Dr. Montgomery: Those cases would get fairly large doses of iodide of potassium and small doses of the proto-iodide.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, June 1, 1896.

The President, A. E. Brune, M.D., in the Chair.

Gynecology at the Lane Hospital, San Francisco.—Dr. Clinton Cushing read a paper bearing this title. A tabular statement detailing the exact nature and number of cases treated opened the paper. All nationalities were represented. The hospital is new and clean, and the occurrence of suppuration in newly made wounds is rare. Whether the time will ever come when suppuration can absolutely be prevented in fresh wounds is problematical. The avenues through which infectious matter may be introduced during a serious and prolonged operation are myriad in number, and a sleepless vigilance, and a most painstaking care is necessary in order to accomplish desired results. Briefly, the hands of both principal and assistant are carefully cleansed with soap and hot water, then placed in a strong aqueous solution of permanganate of potash, then decolorized with a saturated solution of oxalic acid in warm water, and lastly soaked in corrosive sublimate solution (1:1000). The instruments are boiled in an alkaline solution, and the ligatures and sutures are boiled for three hours in alcohol. Where the case is one of abdominal section, the patient is given a mercurial purge, and for 48 hours permitted to have only fluid food, such as broths, well boiled gruel, with milk *ad libitum*, tea, coffee, and cocoa, the object being to have as little decomposing material in the alimentary canal as possible at the time of operation, and thus avoid the distension with gas which is often a troublesome symptom in intra-peritoneal surgery. The skin and mucous membranes at the site of the operation are made clean by scrubbing and the liberal use of soap and water, and the skin of the abdomen is covered for 12 hours with a compress saturated with a solution of corrosive sublimate in alcohol (1:1500). All hair at or near the site of operation is shaved off the day before, or at the time of etherization. Squibbs' ether was used altogether for anesthesia, except in cases of pronounced disease of the kidneys, or in the aged who are disposed to bronchial disease, in which case the A. C. E. mixture is employed. A patient chloroformed to a degree that the perineum is insensitive is nearer the danger line than if ether is used. The method of examining the urethra and bladder and rectum, perfected by Kelly, of Baltimore, is a valuable one. Catheterization of the ureters is not easy, except to an expert. In plastic operations about the vagina, bladder, cervix, and rectum, after the work is finished, let the parts absolutely alone for 8 days, or until healing is complete. Fill the vagina immediately after operation with freshly prepared oxide of zinc ointment, to each ounce of which has been added a grain each of morphine and cocaine. A large teaspoonful is also inserted into the rectum. This controls pain and makes it bearable without the aid of other drugs. The absorption of the morphine and cocaine is very gradual. In repair of the cervix, I have given up the use of scissors entirely, the knife being greatly superior. All lacerations of the perineum are repaired by the flap-splitting method. Silkworm gut is the most satisfactory material for sutures. Occasionally catgut and silk have been used for buried sutures. The fibrocystic tumor was one of the largest on record. It weighed 80 pounds, and contained 7 gallons of greenish-yellow pus. It had been tapped several times. The patient died of shock at the end of 24 hours. The simple fact of the existence of a fibroid tumor of the uterus is certainly no excuse for its removal. When the ovaries are prolapsed into Douglass' pouch, and fixed there by adhesion, a condition exists that is a *bête noir* to physicians. The plan I have pursued for the past 10 years has been to open the abdomen above the pubes, introduce two fingers, and dissect up the adherent organs with the finger tips, and then remove such diseased ovaries and tubes as were manifestly of no further use. If the ovaries were in fair condition, they were stitched to the top of the broad ligament near the uterus, and, where needed, the uterus stitched to the anterior abdominal wall. Even a part of the ovary left in the abdomen is better than none; for while its existence may not enable the woman to bear a child, it prevents the occurrence of a premature menopause.

DR. EMMET RIXFORD, in opening the discussion, mentioned the fact that the frequent origin of suppuration in newly-made wounds was in imperfectly prepared ligature and suture material. Catgut is infected at the start from its origin in the sheep's intestine. How to make it aseptic is the problem. It is easy to sterilize the outside of it; but how to sterilize the inside is the question. Corrosive sublimate solutions tan the outside—and the material is made too brittle. Moist heat destroys it entirely. It may, however, be dried carefully in an oven at about 70° C., and then raised to a temperature high enough to sterilize. But this method has objections. The gut may be dried, as just mentioned, and then boiled in xylol, or cumol, which is better—the lamp being protected by a gauze. A 40 per cent. aqueous solution of formalin may be used, the gut soaked in a saturated solution of soda chlorate, and preserved in alcohol or ether—preferably alcohol. Steam will not sterilize gut. All methods are more or less faulty, and to-day this question of sterilizing or preparing aseptic sutures and ligatures is an unsolved problem.

DR. ALBERT ABRAMS was convinced that much of the trouble, aside from septic ligatures, arises from imperfectly cleansed hands, and was sure that if operators and assistants would immerse their hands in boiling water that less trouble from that source would arise.

Determining the Accommodation.—DR. W. F. SOUTHARD demonstrated the method of using an instrument devised by him for determining accommodation by the reflected image of a small electric lamp. The apparatus is of great value to teachers in class-room work.

Appendicitis.—DR. A. ABRAMS exhibited a specimen of perforated appendix vermiformis, and spoke of the unreliability of the absence of liver dulness as a sign of perforation; and also of the fact that McBurney's point may be the site of tenderness, while operation showed the appendix to be far removed from that point.

SPECIAL CORRESPONDENCE.

GERMANY.

[FROM OUR OWN CORRESPONDENT.]

Further application of the Roentgen Rays.—Technical Improvement.—Congress of German Surgeons.—Centennial Celebration of Vaccination.—The Hamburg Variola Lymph.—Tragic Result after Injection of Anti-diphtheritic Serum.

The subject of skiagraphy naturally continues to engage much attention with us. In the Berlin Medical Society Dr. Feilchenfeld showed pictures from a case of spina ventosa in a child that had for some months been more or less successfully treated according to Dr. Bier's method. This latter, be it remarked in parenthesis, consists in producing artificial hyperemia of the affected parts by external compression, and has been proved very valuable in a large number of cases. In the present instance the patient presented a swelling of the soft parts, a slight thickening of the bone and a small carious focus near the joint, with loosening of the epiphysis from the diaphysis. The diagnosis had naturally been made long ago without the help of the rays, but the pictures obtained afforded much useful information regarding the exact localization and anatomical features of the disease.

Professor Buka, of Charlottenburg, reports a very simple device for enabling one to make direct observations of the bones in the living subject by the help of the rays, but without the necessity of first producing the usual picture. In the place of the photographic plate a screen is introduced which is constructed as follows: On a glass plate a layer of cardboard with a rectangular excision about 4 inches by 10 is pasted and a second larger piece is fixed over this, so that between it and the glass a narrow interspace is formed. This latter is filled out with en evenly distributed layer of finely powdered platino-cyanide of barium or potassium. If the Crooke's tube is then covered with a cloth or a cardboard box, and the screen thus prepared is placed before its cathodal end, the space containing the chemical is seen to light up. On inserting a hand between the tube and the screen a distinct shadow of all those parts (bones, etc.), which are not penetrated by the Roentgen rays is immediately visible. This observation marks a decided advance in the application of the remarkable discovery of the Würzburg Professor, for it enables one to get precisely the right position of the parts to be examined without the trouble of preparing a complete diagram, so that a great deal of labor, delay, and expense is avoided. It is, furthermore, especially noteworthy that in this manner Dr. Buka was able to produce a fairly distinct shadow of the outlines of the heart, as well as of the ribs and spinal column, in a boy 10 years of age. After these experiments, which are described as quite preliminary and capable of much extension, it would hardly seem audacious to believe that it will soon be within the range of possibility to see the outlines of most of the more important organs in the living subject.

The German Chirurgical Society celebrated its twenty-fifth anniversary last week in an appropriate and dignified manner. The Society is now in possession of a special home of its own in Berlin, the Langenbeck House, so named in honor of its former president and founder, Bernard von Langenbeck, who was for years the moving spirit and center of the association. In this well adapted edifice a numerous and eminent company of surgeons—German and foreign—were collected. The proceedings comprised an address of welcome from the President, von Bergmann, and a number of discourses on subjects of general interest. These were particularly interesting from the fact that they were delivered by authors who have been eminent workers on the subjects under discussion. Esmarch discoursed on bloodless operations; Bruns, of Tübingen, on the surgical treatment of goitre; Kœnig on local tuberculosis, and Woeffler on the surgery of the stomach and intestines. Social features were not wanting, a banquet, a promenade concert in the splendid hall of the new parliament building, a series of tableaux vivants were given. These theatrical performances represented a sketch of the development of surgical art from the earliest commencements up to modern times. Although undeniably hardly a poetical theme, Julius Wolff, the foremost epic poet of the present day in Germany, has managed to produce an explanatory poetical context to the tableaux, which greatly contributed to the excellent reception they met with. The last tableaux was a graceful tribute to the memory of the Empress Augusta, the grandmother of the present Emperor. This was well merited, for it is no false flattery to assert that throughout her lifetime she has been always exceedingly active in contributing to the alleviation of the horrors of war, as well as of the sufferings of peace. Her benevolent patronage of the institution of the Red Cross in Germany has proved of the greatest value, and both her purse and her influence were always available for every effort in this direction. On this occasion royalty was also not behindhand, for both Emperor and Empress were present during a considerable part of the entertainment, and made themselves exceedingly agreeable.

The hundredth anniversary of the introduction of vaccination was also duly celebrated in Berlin, in several medical societies, by speeches, appropriate papers, an exhibition of all things pertaining to the subject. etc. It is satisfactory to note that, although the antivaccinationists are again waxing loud in their clamor, very few physicians have been induced to join them. In the Reichstag, a bill was introduced by the parties of the Antisemites and Social Democrats, for the immediate suspension of the existing law on compulsory vaccination, but in consequence of the attitude assumed by the Home Secretary, and of the lucid and convincing arguments of Dr. Kruse (one of the few medical members of the legislative body), the only result achieved was the appointment of a mixed Commission to institute an inquiry into the matter. It is not likely that we shall be benefited by any very important revelations by the procedure, but one may reasonably hope that the lay mind will at length be calmed again on this point. It is, to say the least, difficult to understand how any one really cognizant of the general facts can deny the incalculable benefit the German empire has derived from vaccination. Small-pox is well nigh unknown here; isolated cases are reported here and there, but they are really *rarissimæ aves.* Evidently, the compulsory repetition of the act has much to do with the success achieved, as also the care taken to provide all practitioners with really unimpeachable lymph. Arm to arm vaccination has quite gone out of fashion here, calf vaccine being alone employed.

In Hamburg, Dr. Leonard Voigt has published some highly interesting and instructive observations on the connection existing between variola and cow-pox. In 1881 he inoculated a calf with the contents of variola pustules, producing vesicles which were hardly to be distinguished from cow-pox. The lymph thus obtained proved extremely efficacious, both in the fresh condition and after storage. It has since been extensively used with the best results. Dr. Voigt now presents tables on the results of the vaccination of a large number of children, who have been vaccinated with this lymph in early childhood, and shows that the immunity achieved is more thorough and lasting than that of ordinary preparations. The failures of vaccination, although performed uniformly by well experienced men, amounted to 30 per cent. in the year 1894, whereas the average is under 6 per cent. otherwise. It is further deduced from these observations that cow-pox is really bovine small-pox, and certainly the doctor's experiments are a powerful affirmation of his views.

While the most favorable reports on the good effects of Behring's antitoxine, in extensive series of cases, still continue to pour in from all sides, a most deplorable accident which happened recently in the family of Professor Langerhaus, a prominent member of the medical profession here, suddenly aroused universal excitement and even, in many minds, grave distrust as to the applicability of the method. Briefly expressed, the facts are, that the child, a boy one year and nine months of age, received a prophylactic injection of serum in rather less than the ordinary quantity, and that, although in excellent health, he immediately collapsed, and in five minutes expired. It is well-nigh impossible to explain the cause of this unusually distressing and unforseen event. The stock of serum from which this portion was derived has been employed in a large number of other cases without a single untoward occurrence. There can be no doubt about this, as each supply prepared is duly registered and can always be traced. It is more than strange that of the 1,300 portions of this self-same preparation sent out by the chemical factory at Höchst, the greater part of which appears to have been already injected, no disadvantage should have accrued. Examinations of samples likewise yield a negative result, as has since been announced in an official report. Furthermore, the child was not suffering from diphtheria at the time, nor was there, as was subsequently shown, reason to think he had been exposed to infection. It was stated that he was somewhat lymphatic, but a *post-mortem* examination, performed by three prominent medical officers of health, yielded no further clue as to the cause of death. Especially there were no symptoms to indicate that the injection had been faultily carried out, the site of the puncture in the abdominal walls being free from all abnormalities. All the current explanations of this equally remarkable and unhappy occurrence, therefore, nervous shock, embolus, or whatever theory may be advanced, will not avail to solve the difficulty.

June 5, 1896.

REVIEWS AND NOTICES.

A MANUAL OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in the Medical College of Philadelphia, etc. Second edition revised, with 55 illustrations and three plates in colors. Philadelphia: W. B. Saunders. pp. 254. Price, $1.50, net.

For a book of its size we do not know of any that contains as much information upon this subject. Certainly it is incomplete and unsatisfactory when compared with the larger text-books, but, at the same time, it contains many practical points which will tend to give it popularity.

DIET FOR INFANTS AND CHILDREN IN HEALTH AND IN DISEASE. By Louis Starr, M.D. Philadelphia: W. B. Saunders. Price, $1.25.

The author's name is sufficient guarantee for the excellent quality of the work done in this volume, so that all we have to do is simply to describe the way in which the book is to be used. The book consists of a series of diet tables bound together, but with each leaf perforated so that it can be torn out and left with the mother or nurse. The diets are arranged according to the age of the little patient, and there is also a series appropriate to the necessities of the more common diseases of children. The greatest value of the work lies in the fact that each leaflet contains instructions for preparing the different articles of food. Every family practitioner must appreciate this, and in a very short time he will find the "Diet List" as necessary to him as his visiting list.

DONTS FOR CONSUMPTIVES, OR THE SCIENTIFIC MANAGEMENT OF PULMONARY TUBERCULOSIS. How the pulmonary invalid may make and maintain a modern sanitorium of his home, with additional chapters descriptive of how every consumptive person may apply the forces of nature to assist and hasten recovery; and, also, how the defects of heredity may be best overcome. By Charles Wilson Ingraham, M.D. Binghampton, N. Y. pp. 218.

The object of this work is to place before the public such sanitary rules or measures as are best adapted to the wants of consumptives, and at the same time to afford protection to those who, from the force of circumstances, are compelled to associate with those suffering from phthisis. It does not aim at the self-treatment of phthisis, in fact it warns people against this mistake, and simply gives such information as is absolutely needed by people suffering from a malady in which so much responsibility rests with the patient. We regard this as a step in the right direction, and trust that Dr. Ingraham's efforts will meet with the appreciation which they deserve.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held May 14, 1896, the following were granted certificates to practise medicine in this State:

E. P. Borghetti, Oakland; Univ. of Padua, Italy, Nov. 30,'91.
Frederick L. Breed, San Diego; Med Dept. State Univ , Iowa, Mar. 4,'85.
Chas. Y. Brownlee, San José; Med. Dept. Tulane Univ., La., April 1,'90.
John Burton, Pomona; Jefferson Med. Coll., Pa., Mar. 7,'67.
Charles H. Carleton, Los Angeles; Med. Dept. Univ. City of N. Y., Mar. 6,'86.
Fillie Dittenhoefer, San Francisco; Med. Dept. Univ. of Oregon, April 1,'96.
Wm. H. Flint, Montecito; Bellevue Hosp. Med. Coll., N. Y., Mar. 1,'77.
Harry N. Goff, San Diego; McGill Univ., Montreal, Canada, April 4,'93.
Alonzo P. Griffin, Forbestown; Med. Dept. Univ. of Tenn., Nashville, Feb. 24,'91.
Leroy Henry, Kirkwood; Med Coll. of Indiana, Mar. 30,'93.
James B. Keith, San Francisco; Med. Dept. Univ. City of N. Y., May 1,'94.
Edward H. Latham, San Anselmo; Miami Med. Coll., Ohio, Mar. 5,'84.
Thos. N. Leib, San Francisco; Med. Dept. Univ. of Penn., Mar. 15,'78.
Abraham Litvin, New York; Bellevue Hosp. Med. Coll., N. Y., Mar. 23,'96.
J A. Mackinnon, San Diego; Trinity Univ., Toronto, Canada, May 19,'80.
E. K. Macomber, San José; Med. Dept. Univ. Denver, Colo., April 16,'96.
Daniel B. McCann, Great Falls, Mont.: Rush Med. Coll., Ill., Mar. 25,'90.
John A. McLeod, Brooklyn, N. Y.; Bellevue Hosp. Med. Coll., N. Y., Mar. 11,'89.
Carl L. Morgren, San Francisco; Royal Frederick Univ., Norway, Dec. 21,'86.
Joseph M. Pena, San Francisco; Medico-Chirurgical Coll., Pa., April 11,'94.
Gottlieb C. Shurtleff, Los Angeles; Long Island Coll. Hosp., N. Y., Mar. 12,'91.
James H. Wagner, Selma; Med. Dept. Vanderbilt Univ., Tenn., Mar. 31,'96.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific) from May 20, 1896, to June 20, 1896.

Captain Euclid B. Frick, Assistant Surgeon, will proceed without delay to San José, California, and report to the commanding officer Light Artillery Battalion, for duty with that command during the remainder of its absence from the Presidio of San Francisco. Par. 6, S. O. 61, Dept. of Cal., June 2, 1896.

Captain George M. Wells, Assistant Surgeon, will accompany Battery H, 5th Artillery, to Fort Canby, Washington, and return thence with Batteries B and M, 5th Artillery, to their stations in the harbor of San Francisco. During the absence of Captain Wells, the Chief Surgeon of the Department—Lieutenant Colonel Johnson V. D. Middleton, Deputy Surgeon General—will perform his duties at Fort Mason and in this city. Par. 9, S. O. 63, Dept. of Cal., June 9, 1896.

First Lieutenant John S. Klup, Assistant Surgeon, is relieved from duty at Fort Canby, Wash., and will return to his proper station. Par. 1, S. O. 95, Dept. of the Columbia, June 18, 1896.

Leave of absence for four months, on Surgeon's certificate of disability, is granted First Lieutenant Benjamin Brooke, Assistant Surgeon, Fort Canby, Washington.

The order assigning Captain Ashton B. Heyl, Assistant Surgeon, to duty at Fort Canby, Washington, is revoked; he is relieved from duty at Fort Thomas, Kentucky, and ordered to Fort Riley, Kansas, for duty, relieving Captain Thomas V. Raymond, Assistant Surgeon.

Captain Raymond, on being thus relieved, is ordered to Fort Canby, Washington, for duty

Official List of Changes in the Medical Department U. S. Navy (Pacific Station,) from May 20, 1896, to June 20, 1896.

Past Assistant Surgeon George Rothganger from U. S. R. S. Independence, and to U. S. S. Oregon.

Surgeon C. T. Hibbett from U. S. S. Bennington, and to U. S. R. S. Independence, at Mare Island, California.

Past Assistant Surgeon J. W. Baker from Examining Board, New York, and to U. S. S. Bennington.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service (District of the Pacific) from May 20 to June 20, 1896.

Assistant Surgeon Rupert Blue, to proceed from San Francisco, Cal., to Angel Island Quartine Station for duty.

ITEMS.

Dr. W. B. Lewitt has removed from 800 McAllister to 500 Van Ness Ave., San Francisco, California.